

TELEFUNKEN SERVICE

AUDIOVISION
AUDIOVISION
AUDIOVISUEL

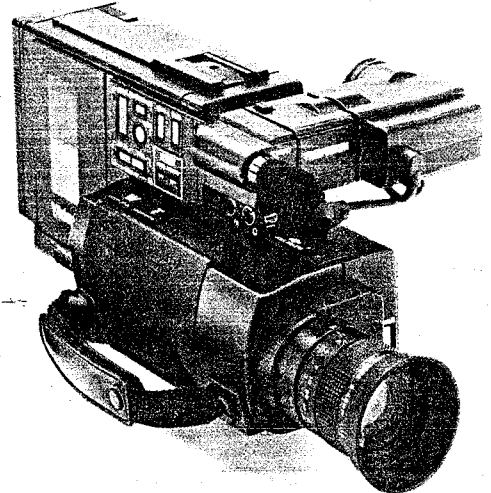
Camera-Recorder
890 movie/1890 movie

Druck-Nr. 319 482 675

und Zubehör

Schaltpläne
Lagepläne

Schematic Diagrams
Component Layouts



Schutzgebühr 10,- DM

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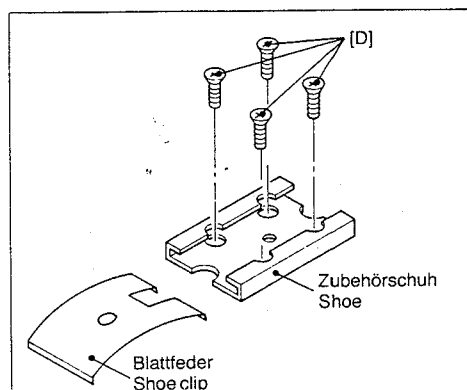
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Ausbauhinweise

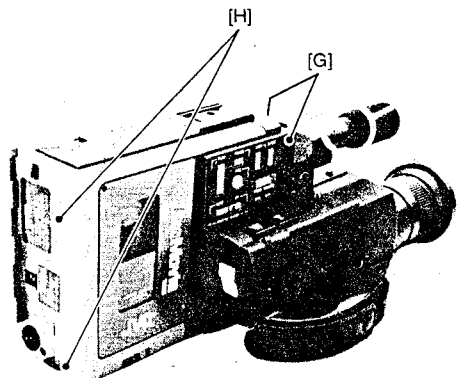
1. Gehäuse

- Zuerst die Blattfeder im Zubehörschuh anheben und herausziehen. 4 Schrauben [D] lösen und Zubehörschuh abnehmen.
- Deckplatte an den Punkten [E] anheben, um die Rastnasen zu lockern und dann in Pfeilrichtung [F] abziehen.



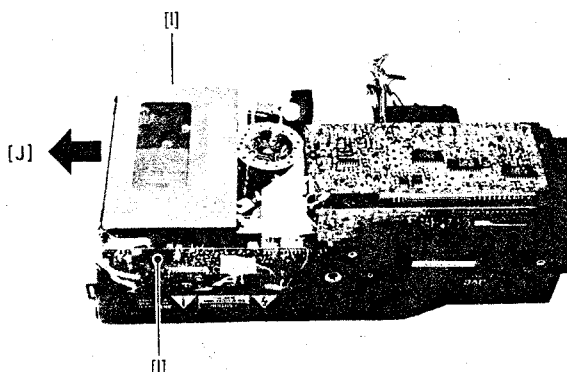
2. Gehäuse

2 Schrauben [G] und 4 Schrauben [H] herausdrehen, um die obere Gehäusenhälfte von der unteren zu lösen.



3. Cassettenfach-Abdeckung

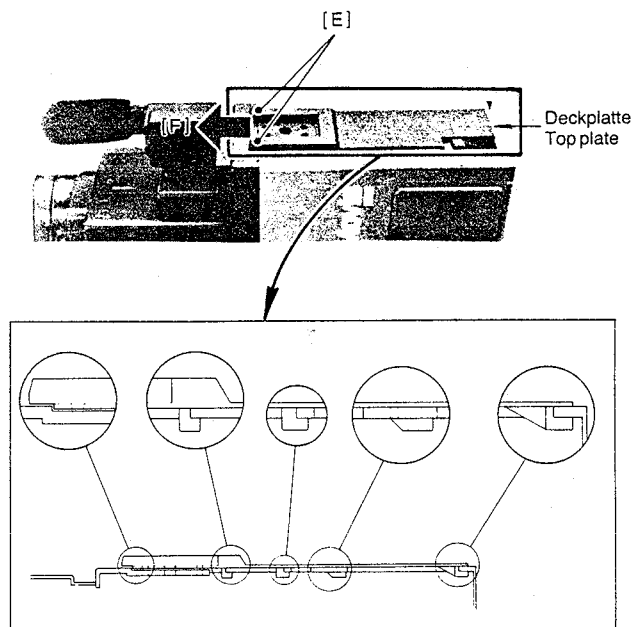
2 Schrauben [I] lösen. Cassettenfach-Abdeckung in Pfeilrichtung [J] abziehen.



Disassembly

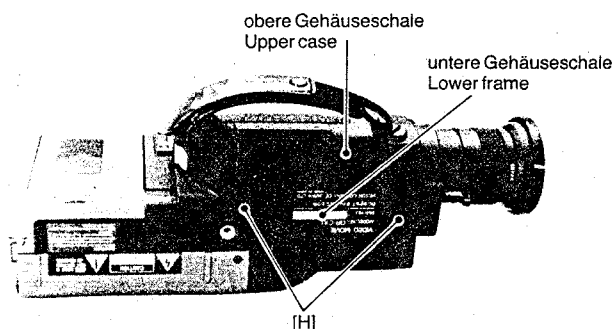
1. Top plate

- First remove the shoe clip by raising the part upwards and pulling it to the front. Then remove the 4 screws [D].
- Raise the two parts [E] of the top plate to unfasten its claws and then slide it in the direction of [F]:



2. Housing

Remove the 2 screws [G] and 4 screws [H] to partially take off the upper case from the lower frame.

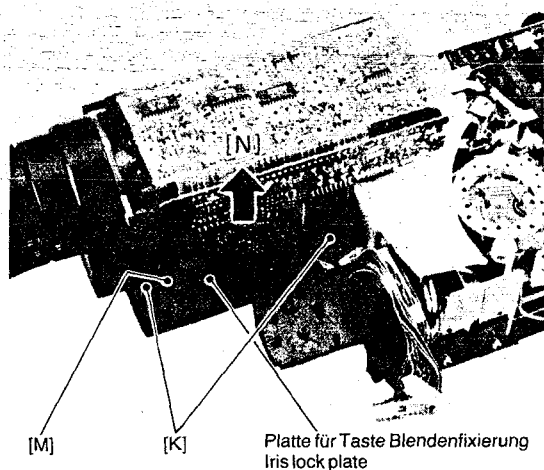


3. Cassette cover

Remove the two screws [I]. Then the cassette cover can be removed by pulling it in the direction of [J].

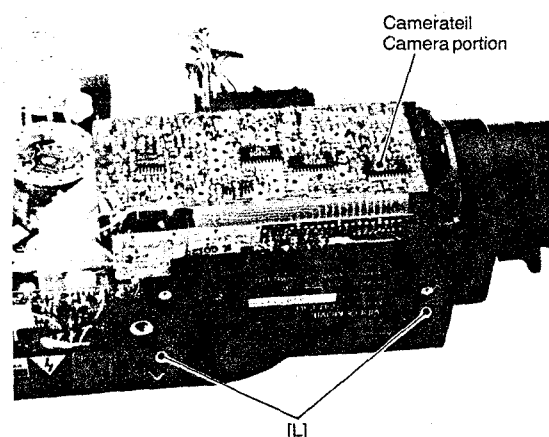
4. Camerateil

Zunächst 2 Schrauben [K] und 2 Schrauben [L] lösen. Schraube [M] lösen und die Platte für Taste Blendenfixierung in Pfeilrichtung abnehmen. Dann das Camerateil nach oben herausnehmen.



4. Camera portion

Remove the two screws [K] and two screw [L] first, and then remove a screw [M] to remove the iris lock plate by raising it upwards in the direction of [N]. After that, the camera can be removed by raising it upwards.



5. Recorderteil

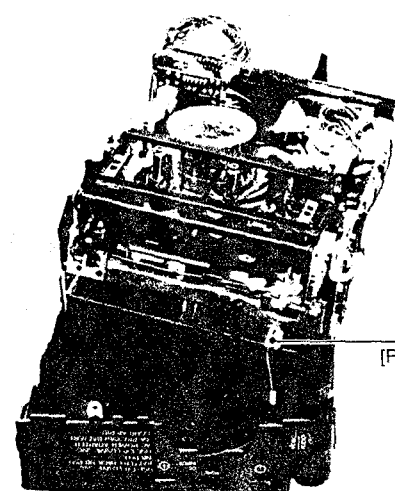
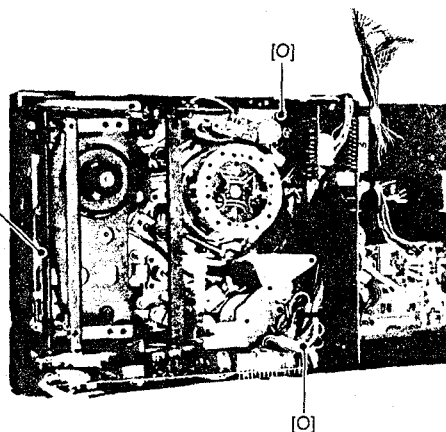
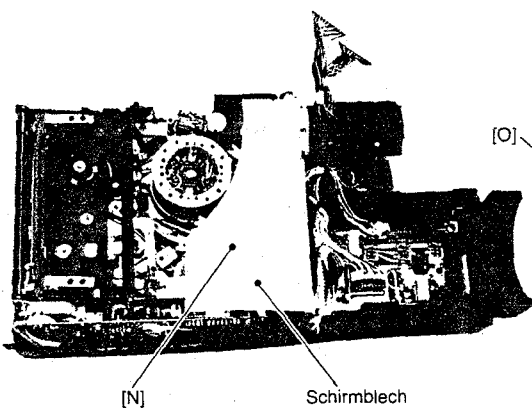
Schraube [N] und Abschirmung entfernen. 3 Schrauben [O] lösen und das Recorderteil nach oben herausnehmen (Stecker [P] abziehen).

Hinweis: Das Recorderteil sehr vorsichtig herausnehmen, um freiliegende mechanische Teile nicht zu beschädigen.

5. Tape recorder

Remove the screw [N] and the shield plate. Remove the 3 screws [O]. Then remove the deck by pulling it upwards. (Remove connector [P].)

Note: When removing the deck, pay the most careful attention not to touch the mechanism parts exposed.



6. E-E und Anzeigenplatte [2] [3]

3 Schrauben [Q] lösen und die Schaltungsplatte herausklappen.

6. E-E and Indicator board [2] [3]

Remove the three screws [Q] so that the E-E & IND board can be opened to this side.

7. Audio-Servoplatte [0] [4]

7 Stecker [R] abziehen und die Audio/Servoplatte in Pfeilrichtung [S] abziehen. Stecker für den Audio-Kopf abnehmen.

7. Audio-Servo board [0] [4]

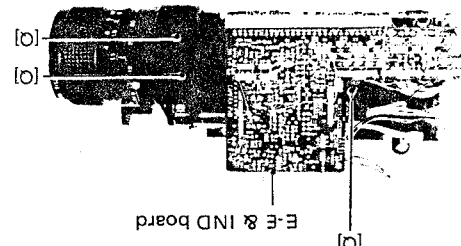
First remove the 7 connectors [R] and then remove the AUDIO/SERVO board by pulling it in the direction of the arrow [S]. Remove the connector for the audio head.

8. Videoplatte [0] [2]

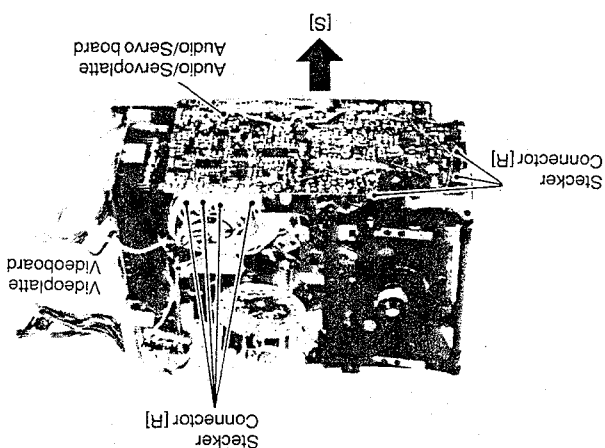
nach oben abziehen.

8. Video board [0] [2]

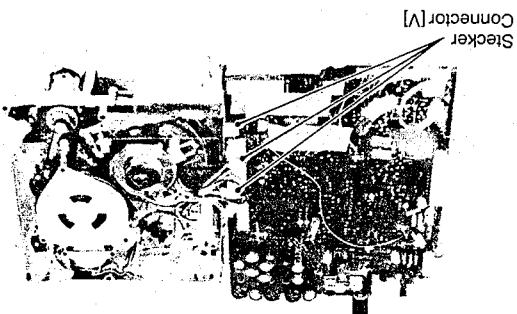
Pull out in upwards direction.



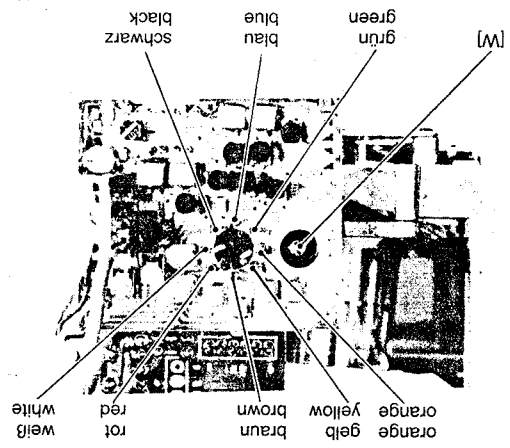
9. **Platte für Servoregelung und Mechaniksteuerung** [0] [1]
Eine Schraube [T] und 2 Stecker [U] entfernen und 3 Stecker [V] abziehen.



9. **Mechacon/Servo board** [0] [1]
Remove a screw [T] and the 2 connectors [U] to remove the MECHACON/SERVO board. Remove 3 connectors [V].



10. **Videokopf-Vorverstärker**
Abschirmung und Schraube [W] entfernen und 8 Kopftrommelzuleitungen ablöten.



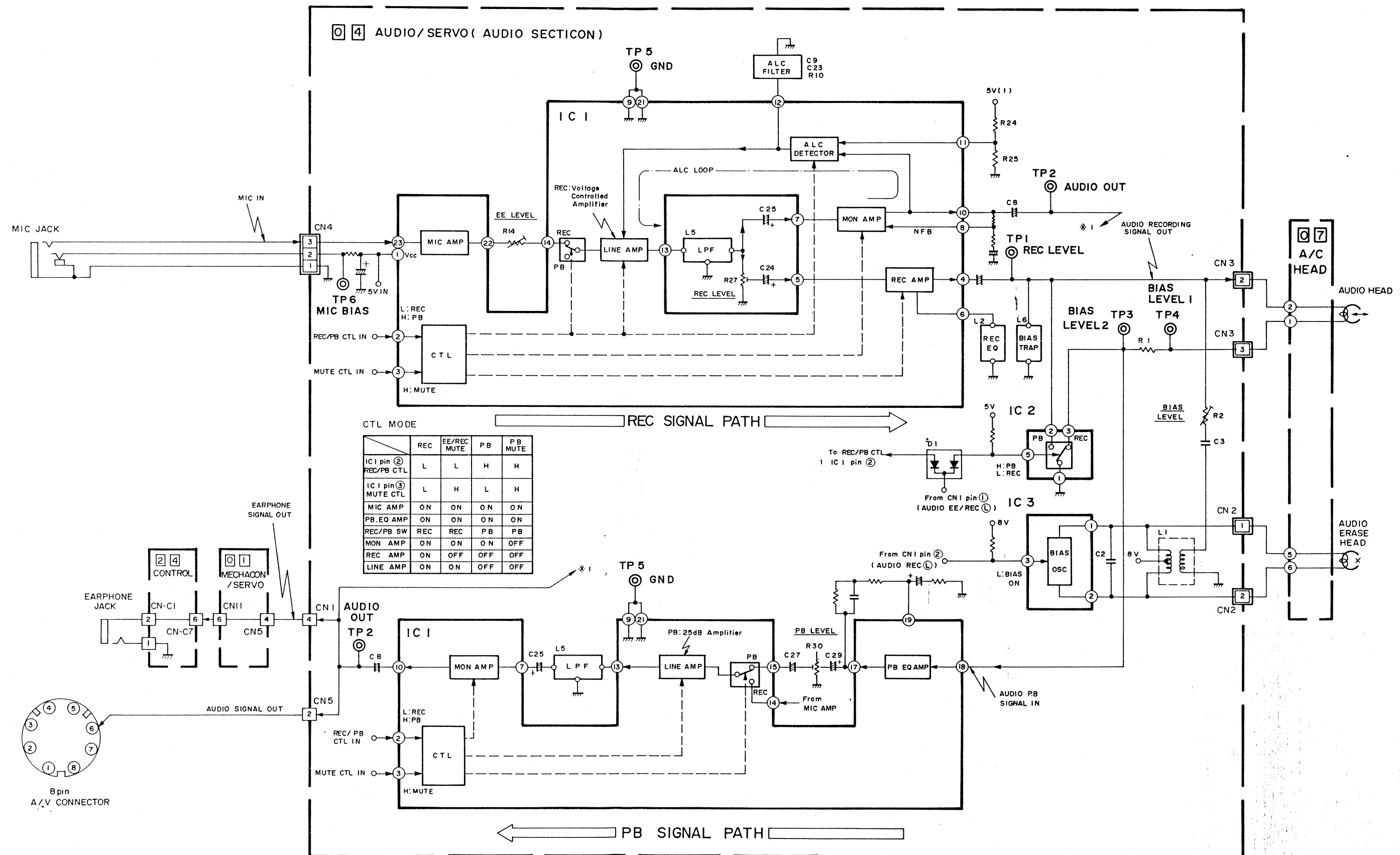
10. **Drum-Preamplifier**
Remove the cover of the shield case, a screw [W] and desolder the eight wires to the drum.

Abkürzungen · Abbreviations

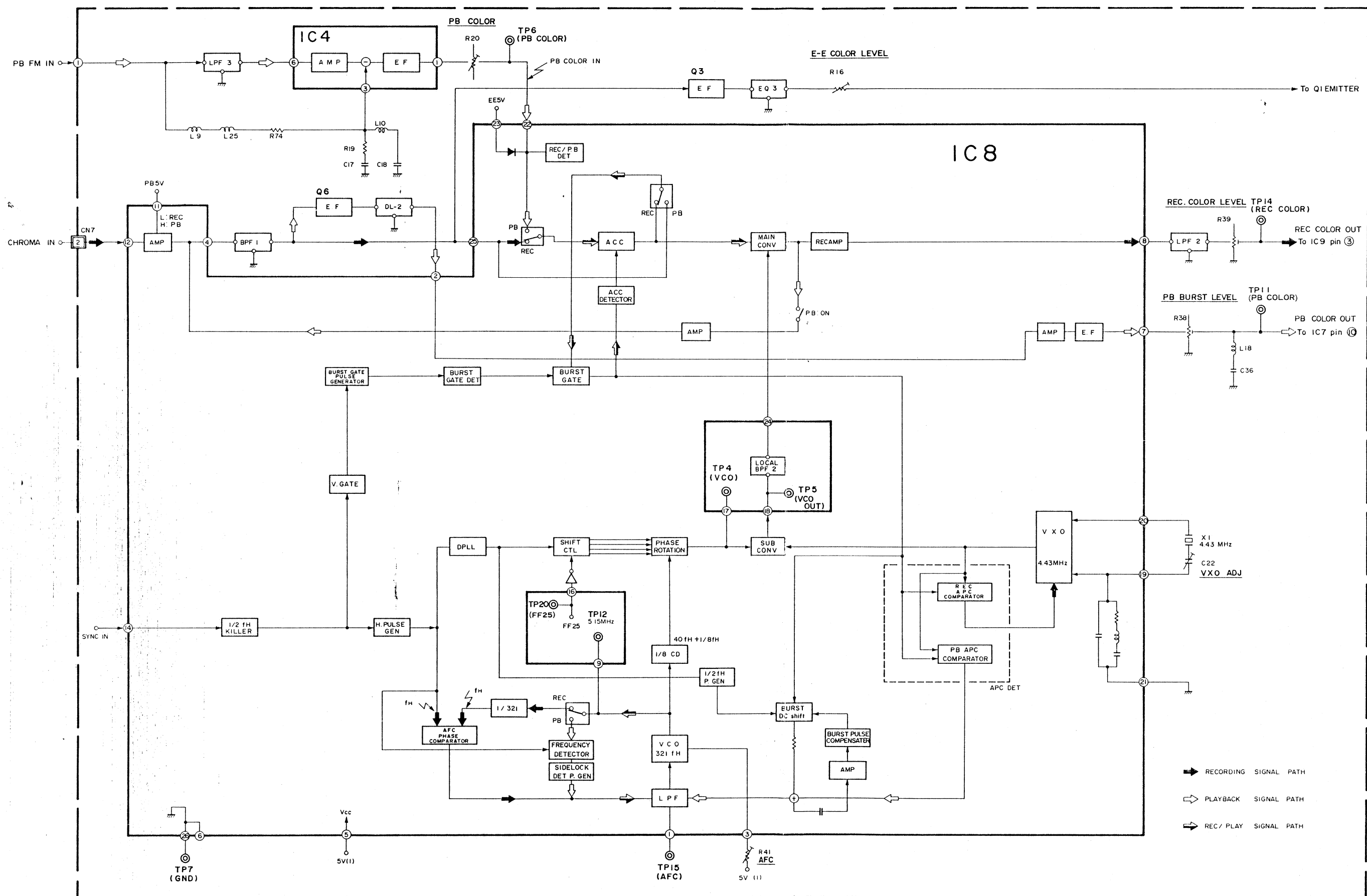
A			CONN	Steckverbinder	Connector	ID	Kennimpuls	Identification (Pulse)	RS FF	RS Flipflop	RS Flipflop
AC	Wechselstrom	Alternating Current	CP	Sicherung	Circuit Protector	IF	ZF	Intermediate Frequency	RST	rücksetzen	Reset
ACC	autom. Farbsteuerung	Automatic Color Control		Klemm-Impuls	Clamp Pulse	IFR	Infrarot	Infrared	R/P	Aufnahme/Wiedergabe	Record/Playback
A/CTL	Audio/Kontrollkopf	Audio/Control	CPU		Central Processing Unit	IFT	ZF-Übertrager	Intermediate Frequency Transformer	RPT	Wiederholung	Repeat
ADD	Addierstufe	Adder	CRT	Kathodenstrahlröhre	Cathode Ray Tube			Indicator	RT	Rotationsübertrager	Rotary Transformer
ADC	Analog/Digital-Konverter	Analog Digital Converter	C. SYNC	Synchronisation	Composite Synchronization	IND	Anzeige	Inhibit	RUN	Bandlauf	Running
ADJ	Abgleich	Adjustment	C. SUP	Farb-Unterdrückung	Chroma Suppressor	INH	Inhibit	Inhibit	RY	Relais	Relay
ADUB	Nachvertonung	Audio Dub	CTC	Übersprechdämpfung	Crosstalk Cancel	INS	Insertschnitt	Insert			
AE	Audio Löschkopf	Audio Erase	CTL	Regelung	Control	INT	intern	Internal	S		
AEF	autom. Schnittfunktion	Automatic Editing Function	CRT. GEN	Schriftgenerator	Character Generator	INV	Inverter	Inverter	SAW	Sägezahnspannung	Sawtooth
AFC	autom. Frequenzsteuerung	Automatic Frequency Control	CVBS	FBAS-Signal	Chrominance, Video, Burst and Sync	I/O	Eingang/Ausgang	Input/Output	SC	Sub-Träger	Subcarrier
AFT	autom. Feinabstimmung	Automatic Fine Tuning				IR	Infrarot	Infrared	SCH	Suchlauf	Search
AGC	autom. Verstärkungsregelung	Automatic Gain Control							SEL	Auswahl	Select
AH	Audio-Kopf	Audio Head	D			K			SENS	Sensor	Sensor
AHD	Audio Aufzeichnungsdichte	Audio High Density	D	Kopftrommel	Drum	K	Kathode	Cathode	SENS CTL	Empfindlichkeitsregelung	Sensitivity Control
AL	Nach Einfädern	After Loading	DAC	Digital/Analog-Konverter	Digital Analog Converter				SEP	Trennung	Separation
ALC	autom. Lichtkompens.	Automatic Light Compensation	dB	Dezibel	Decibel	L			SF	Sourcefolger	Source Follower
	Pegelregelung	Automatic Level Control	DC	Gleichstrom	Direct current	L	Low-Pegel (0)	Low	SFF	kurzes Vorspulen	Short Fast Forward
A/S/M	Audio/Servo/Mechaniksteuerung	Audio/Servo/Mechacon	DCC	Dunkelstromkompensation	Dark Current Compensator	LED		Light Emitting Diode	SFWD	Suchlauf vorwärts	Search Forward
			DD	Direkt-Antrieb	Direct Drive	LIN	Linearität	Linearity	SH	Farbschattierung	Shading
ALM	Alarm	Alarm	DEC	Decoder	Decoder	LIM	Begrenzer	Limiter	SIF	Ton-ZF	Sound Intermediate Frequency
ALU	arithm. Logikeinheit	Arithmetic Logic Unit	DEF	Ablenkung	Deflection	LOAD	Einfädern	Loading	SN	Signal/Rausch-Abstand	Signal to Noise Ratio
AM	Amplituden-Modulation	Amplitude Modulation	DEMOND	Demodulator	Demodulator	LP	Langspielgeschwindigkeit	Long Play	SOL	Magnet	Solenoid
AMP	Verstärker	Amplifier	DEMUX	Demultiplexer	Demultiplexer	LPF	Tiefpaßfilter	Low-pass Filter	SOS	Ton-Mischbetrieb	Sound on Sound
ANT	Antenne	Antenna	DET	Detektor	Detector	LSB	unteres Seitenband	Lower Sideband	SP	Normalspiegelgeschwindigkeit	Standard Play
APC		Automatic Pedestal Control	DEV	Abweichung	Deviation				SR	Abwickelspulenteller	Supply Reel
APL	Phasenregelung	Automatic Phase Control	D. FOCUS	dyn. Focus	Dynamic Focus	M			SREV	kurzes Rückspulen	Search Reverse
ASS'Y	durchschnittl. Videopegel	Average Picture Level	DFRS	Trommel-Freilauf Stoppsignal	Drum Free RUN STOP	M	Motor	Motor	SREW	Zeitupe/Standbild	Slow/Still
ATT	Einheit	Assembly	DIF TRANS	Differential-Transformator	Differential Transformer	MANU	manuell	Manual	S/S	Sync Signal Generator	Sync Signal Generator
AUTO	Abschwächer	Attenuator	DISCR	Discriminator	Discriminator	MAX	maximum	Maximum	S. SH	statische Farbschattierung	Static Shading
AUX	automatisch	Automatic	DL	Verzögerungsleitung	Delay Line	MDA	Motortreiberverstärker	Motor Drive Amplifier	SSNS	Startsensor	Start Sensor
AUD	Reserveeingang	Auxiliary	DOC	Dropout Kompensation	Dropout Compensator	MIC	Mikrofon	Microphone	STD	Normal	Standard
AW	Audio	Audio	D. SH	dyn. Shading-Regelung	Dynamic Shading	MIN	Minimum	Minimum	SUP	Abwickelspule	Supply
	autom. Weißabgleich	Automatic White Balance	DYAC	Blendenregelung	Dynamic Aperture Control	MIX	Mischstufe	Mixer	SW	Schalter	Switch
B			E			MMV	Monomultivibrator	Monostable Multivibrator	SWD	geschaltet	Switched
B	Chassis	Base	E	Schnitt	Edit	MOD	Modulator	Modulator	SW REG	Schaltregler	Switching Regulator
	Schwarz	Black	EDP	elektr. Datenverarbeitung	Electronic Data Processing	MODEM	Modulator-Demodulator	Modulator-Demodulator	SYNC	Synchronisation	Synchronization
	Blau	Blue	E-E	E-E	Electric to Electric	MON	Monitor	Monitor	SYNC SEP	Synchronimpuls Trennstufe	Sync Separator
BAL	Symmetrie	Balance	EF	Emittierfolger	Emitter-Follower	MOS	MOS	Metal Oxide Silicon	SYSCON	System-Überwachung	System Control
BATT	Akku	Battery	EMP	Vorverzerrung	Emphasis	MPX	Multiplexer	Multiplexer			
BATT. ALM	Akku-Anzeige	Battery Alarm	ENC	Encoder	Encoder	MS	Betriebsartwahl	Mode Select	V		
BBD	Eimerkettenspeicher	Bucket Brigade Device	EN	Enable	Enable	MUT	Tonabschaltung	Muting	V	vertikal	Vertical
B. BLK	Strahl-Austastung	Beam Blanking	ENV	Hüllkurve	Envelope				VCO	spannungsgesteuerter Oszillator	Voltage Controlled Oscillator
BCD	binär codiert dezimal	Binary Coded Decimal	EOT	Bandende	End of Tape	N					
BEAM DET	Elektronenstrahldetektor	Beam Detector	EP	Long Play	Extended Play	NAND	Not-And	Not-And	VD	vert. Treiberimpuls	Vertical Drive Pulse
BEG	Anfang	Beginning	EQ	Equalizer	Equalizer	NC	nicht belegt	Not Connected	VP	vert. Parabelimpuls	Vertical Parabolic Pulse
BFP	Burst Kennimpuls	Burst Flag Pulse	ES	elektron. Schalter	Electronic Switch	NFB	Dämpfungsfilter	Neutral Density (Filter)	VR	Poti	Variable Resistor
BIT	Bit	Binary Digit	ESNS		End Sensor	NLN	Gegenkopplung	Negative Feedback	VS	vert. Sägezahnimpuls	Vertical Sawtoothed Pulse
BLC	Ruhestromregelung	Back Light Control	EVF	Sucher	Electronic Viewfinder	NO	nicht linear	Non-Linear	VXO	steuerbarer Quarzoszillator	Variable Crystal Oscillator
BLK	schwarz	Black	EXP	Expander	Expander	NOR	normalerweise offen	Normally Open	VLT	violet	Violet
BLU	blau	Blue	EXT	extern	External	O			V/T	Video/Fernsehen	Video/Television
BNC	BNC-Buchse	Bayonet Connector	F			OB	optischer Schwarzwert	Optical Black	V/U	VHF/UHF	VHF/UHF
BOT	Bandanfang	Beginning of Tape	F ADV	Bildfortschaltung	Frame Advance	OPAMP	Operationsverstärker	Operational Amplifier	VSCH	variable Suchlaufgeschw.	Variable Search
BPF	Bandpaß-Filter	Bandpass Filter	F.B.T	Zeilenrafo	Flyback Transformer	OP	optisch	Optical	W		
BRK	Bremse	Brake	FDP	Display	Fluorescent Display Panel	ORN	orange	Orange	WARN	Warnanzeige	Warning
BRN	braun	Brown	FE	Voll-Löschkopf	Full Erase	OSC	Oszillator	Oscillator	W. BAL	Weißabgleich	White Balance
BRT	Helligkeit	Brightness	FET	FET	Field Effect Transistor				WHT	weiß	White
BT	Bereichsabstimmung	Band Tuning	FF	schneller Vorlauf	Fast Forward	P			WV	Arbeits-Spannung	Working Voltage
BW or B/W	schwarz/weiß	Black and White				PAR	Parabel	Parabola	W & D	weiß und schwarz	White and Dark
C			G			PB	Wiedergabe	Playback	X		
C	Kapazität	Capacitance	G	Gate	Gate	PC	Photokoppler	Photocoupler	XTAL	Quarz	Crystal
C	Collector	Collector				PCM	Puls-Code-Modulation	Pulse Code Modulation			
C (Chromal)	Farbsignal	Chrominance	FG	Frequenzgenerator	Frequency Generator	PED	Schwarzwert	Pedestal	Y		
CAP	Bandantrieb	Capstan	FM	Frequenzmod. Audiosignal	FM Audio	PGM	Programm	Program	Y	Luminanzsignal	Luminance
CAR	Träger	Carrier	FMA	Vollbilddaufnahme	Full Recording Frame	PI	Impulsgenerator	Pulse Generator	YEL	gelb	Yellow
CARR. BAL	Träger-Balance	Carrier Balance	FR	Frequenz	Frequency	PLL	Lichtschränke	Photo Interrupter	YL	Y-Signal, schmalbandig	Luminance Low Band Signal
CASS	Cassette	Cassette	FREQ	Frequenz	Frequency	p-p	Phasenregelkreis	Phase Locked Loop	YW	Y-Signal, breitbandig	Luminance Wide Band Signal
C. BLX	zusammengesetzter Tastimpuls	Composite Blanking	F V CONV	Frequ./Spg-Konverter	Frequency to Voltage Converter	POS	Spitze-Spitze	Peak-to-Peak			
			FWD	vorwärts	Forward	PR	Position	Position			
CCD	Eimerkettenverzögerung	Charge Coupled Device	G			PREAMP	Andruckrolle	Pinch Roller			
CCT	Schaltung	Circuit	G	Gate	Gate	PRL	Vorverstärker	Preamplifier			
CdS	Cadmium-Sulfid	Cadmium Sulphide		grün	Green	P/S	Umschwenken (Zwischenrad)	Preroll			
CD	abwärtszählen	Countdown		Gitter-Elektrode	Grid	PSC	Pause/Standbild	Pause/Still			
CENT	Mitte	Center	GEN	Generator	Generator	PU	Impuls-Anstiegssteuerung	Pulse Swallowing Control			
CF	Keramikfilter	Ceramic Filter, Color Frame	GND	Masse	Ground	PWB	Aufnehmer	Printed Wiring Board			
CC	Cassettschacht	Cassette Compartment	GRN	grün	Green	PWM	Schaltungsplatte	Pulse Width Modulation			
CE	Chip Enable	Chip Enable	GRY	grau	Gray	PWR	Pulsbreitenmodulation	Power			
CH	Kanal	Channel	H								
CHG	Last	Charge	H	High-Pegel (1)	High	Q					
CHROMA	Helligkeitssignal	Chrominance	H	Horizontal	Horizontal	Q	Güte	Quality Factor			
CLK	Takt	Clock	HBF	horiz. Burst Kennimpuls	Horizontal Burst Flag Pulse	R					
CLR	Löschen	Clear	H. CENT	horiz. Mitte	Horizontal Center	RA	rot	Red			
CMOS		Complementary Metal Oxide Silicon	HD	horiz. Treiberimpuls	Horizontal Drive Pulse	RAM	Widerstands-Array	Resistor Array			
			HG	Hallgenerator	Hall Generator	REC	RAM	Random Access Memory			
CMD	Befehl	Command	HP	horiz. Linearität	Horizontal Linearity	REF	Aufnahme	Recording			
CNT	Zähler	Count, Counter	HPF	horiz. Parabelimpuls	Horizontal Parabolic Pulse	REG	Referenz	Reference			
CONV	Umsetzer	Converter	HS	Hochpaßfilter	High-pass Filter	REMOCON	Regler	Regulator			
COL	Farbe	Color	HV	horiz. Sägezahn	Horizontal Sawtoothed Pulse	REV	Fernsteuerung	Remote Control			
COM	gemeinsamer Anschluß	Common	H. WIDTH	hochspannung	High Voltage	REW	Vertauschung	Reverse			
COMB	Zusammensetzung	Combination		Bildbreite	Horizontal Width	RF	Rückspulen	Rewind			
	Kammfilter	Comb Filter	I				HF	Radio Frequency			
COMP	Vergleichsstufe	Comparator	IC	integrierte Schaltung	Integrated Circuit						
	Zusammengesetzt	Composite									
	Ausgleich	Compensation									

parts are importantly related to safety.
When replacing them, make sure to use specified parts.

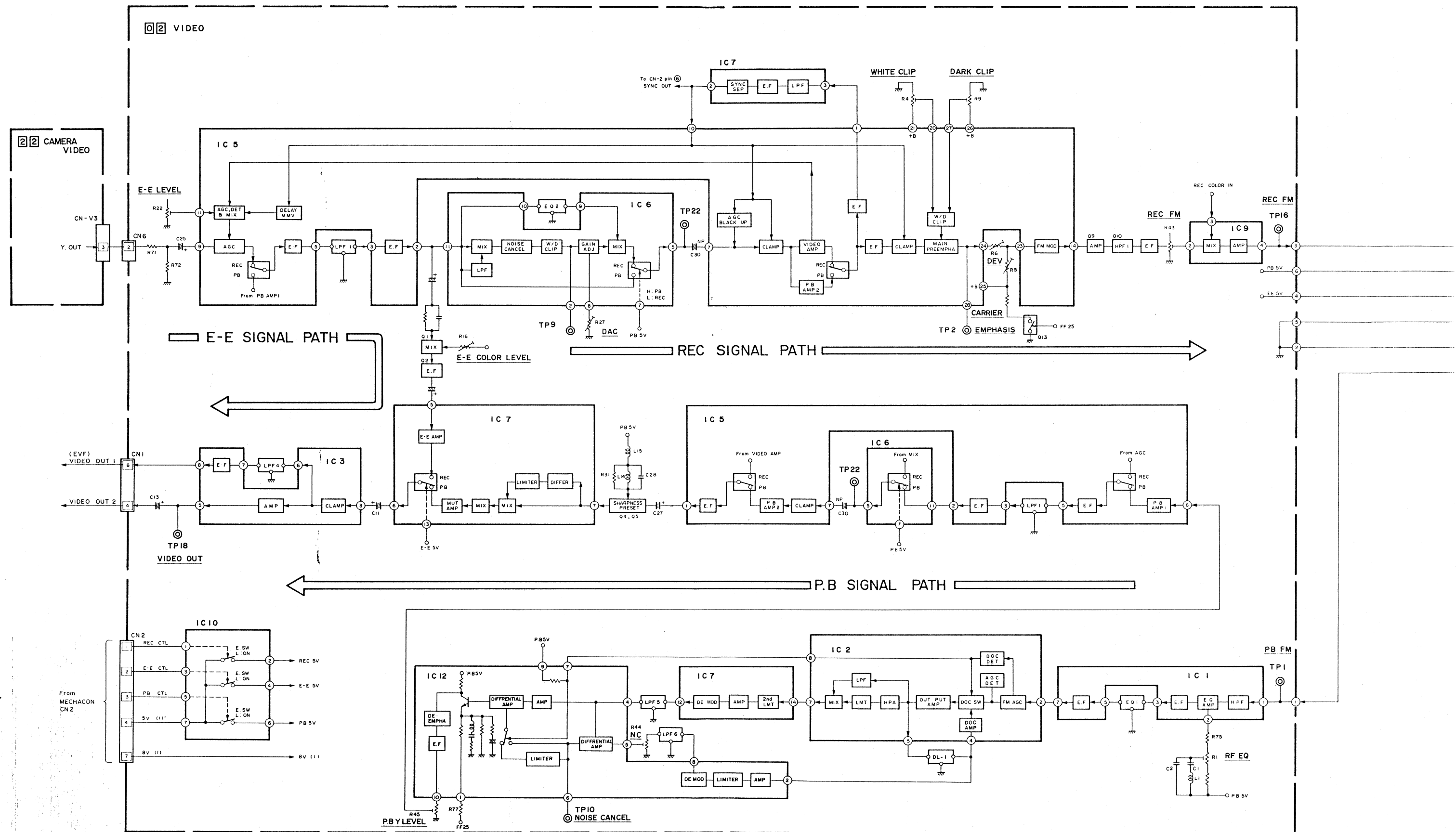
Audio-Blockschaltbild
Audio block diagram

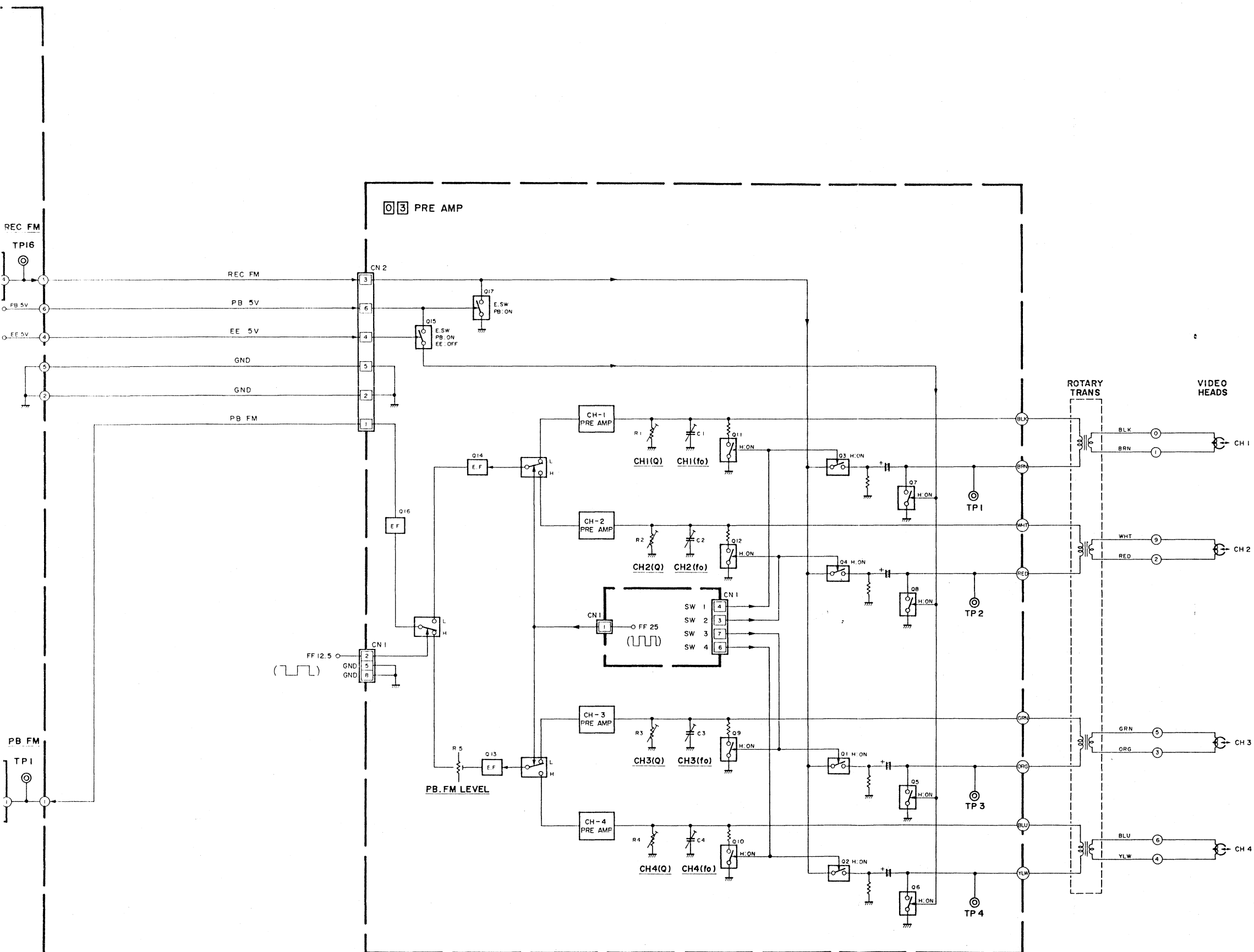


Video-Blockschaltbild (Farbsignal)
Video block diagram (chroma signal)



Video-Blockschaltbild (Luminanzsignal)
Video block diagram (luminance signal)



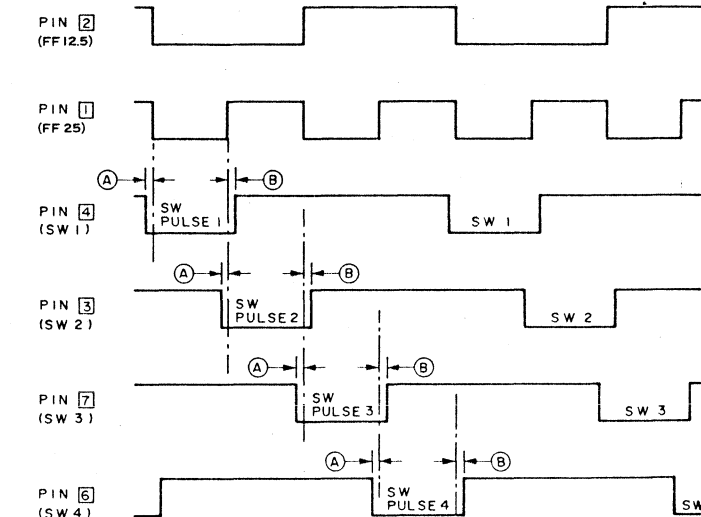


P. B. MODE

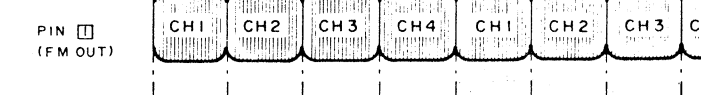
SWITCHING PULSE TIMING CHART

(A) = SUP OVER LAP
(B) = TU OVER LAP

PRE AMP IC CN1



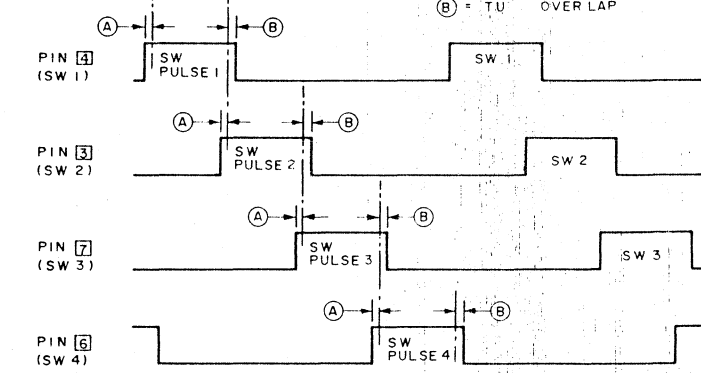
PRE AMP IC CN2



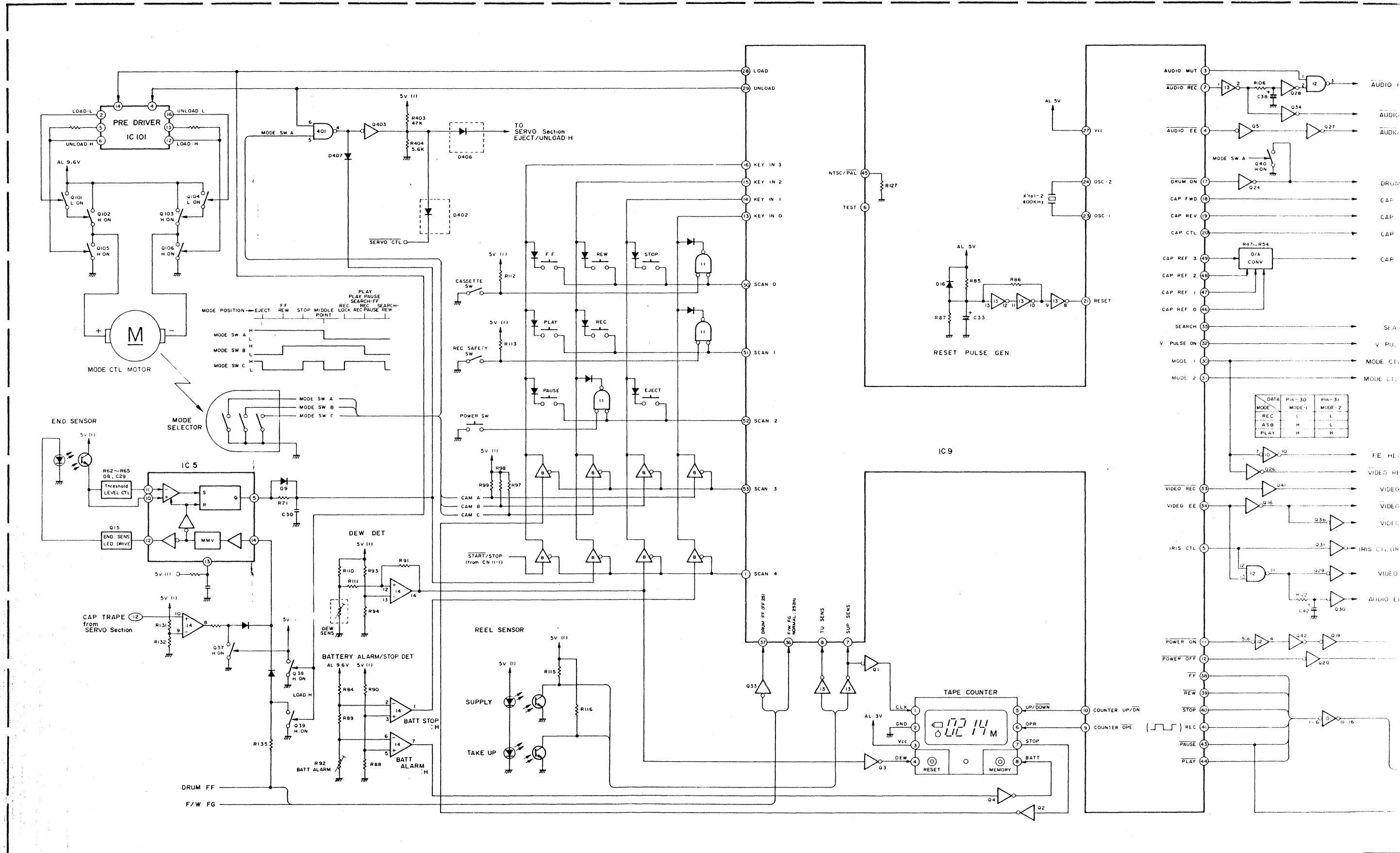
REC MODE

SWITCHING PULSE TIMING CHART

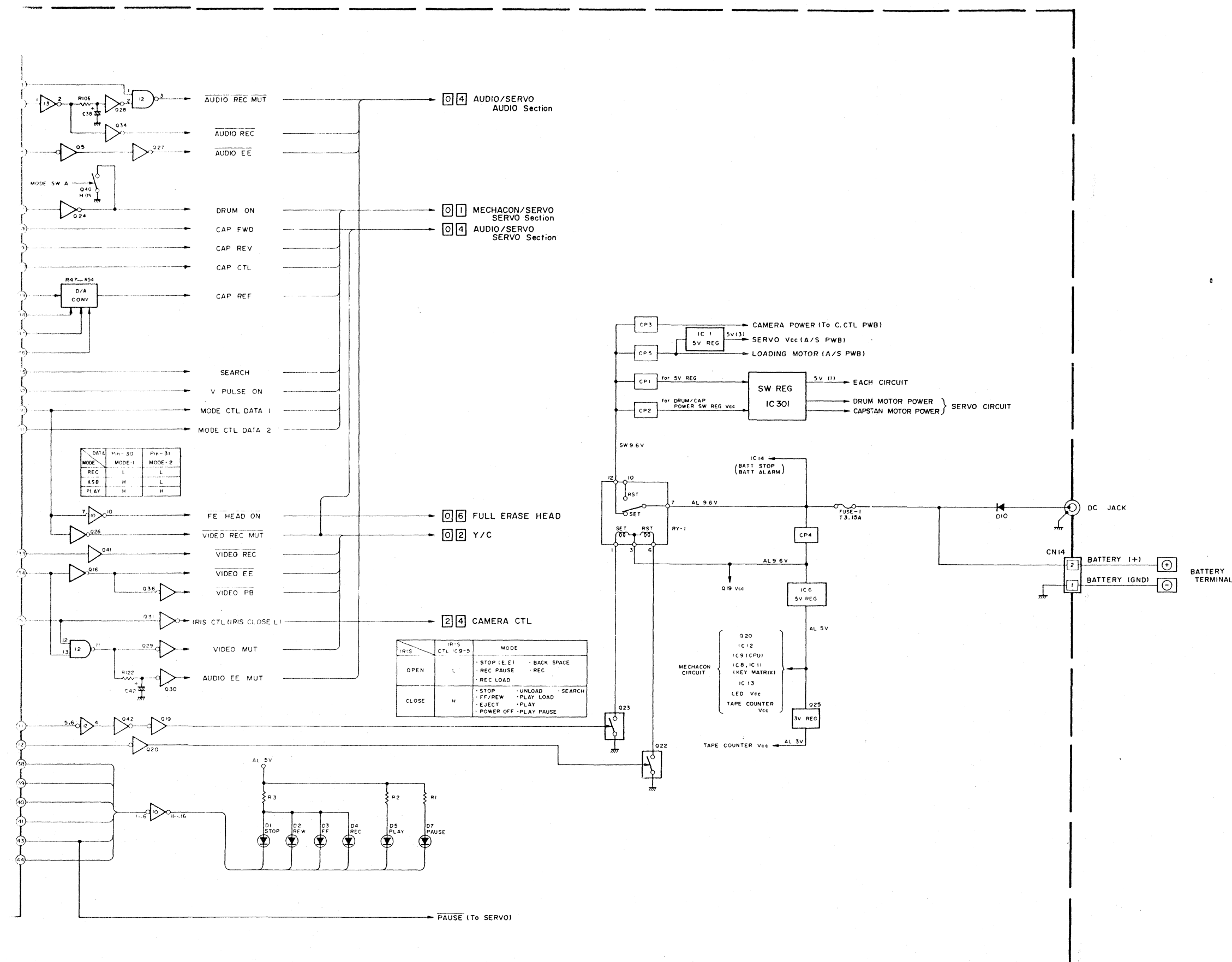
(A) = SUP OVER LAP
(B) = TU OVER LAP



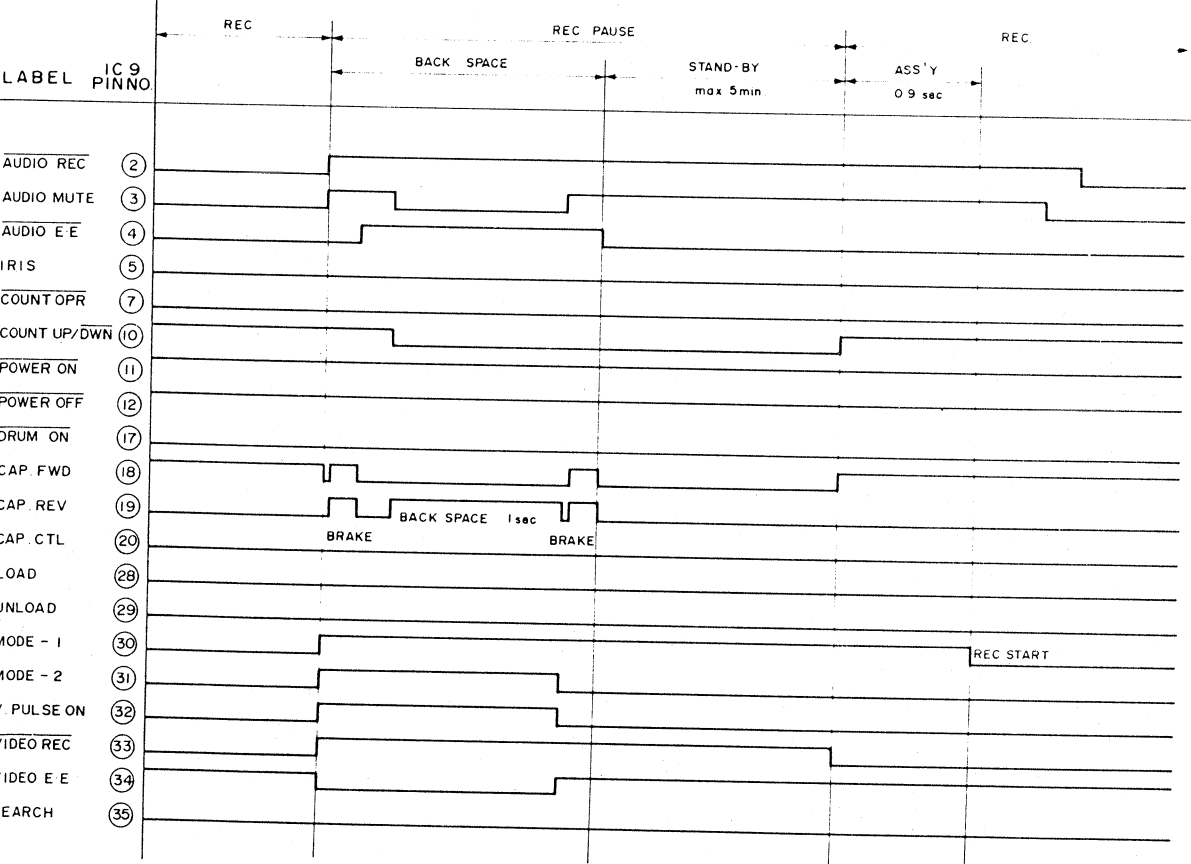
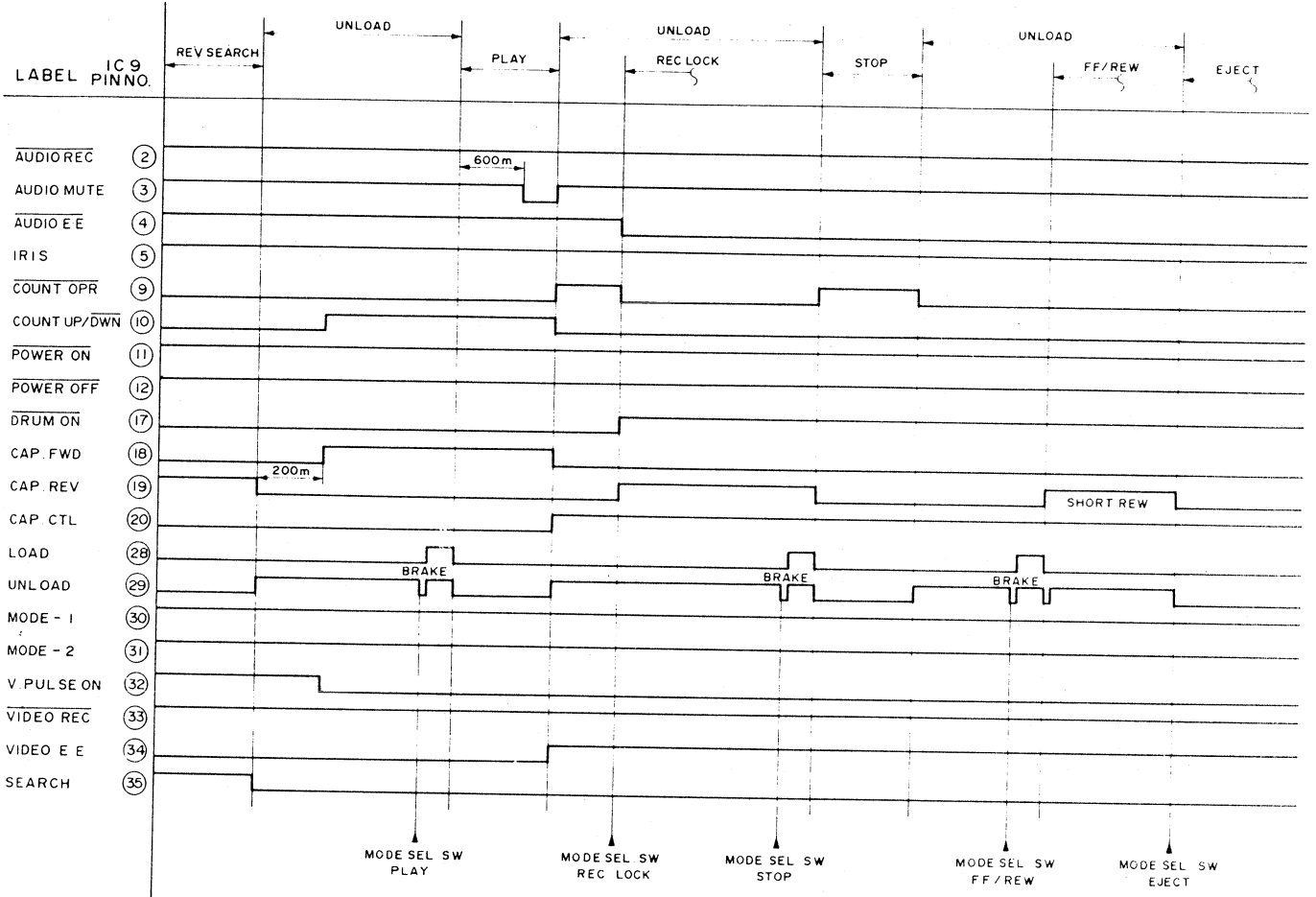
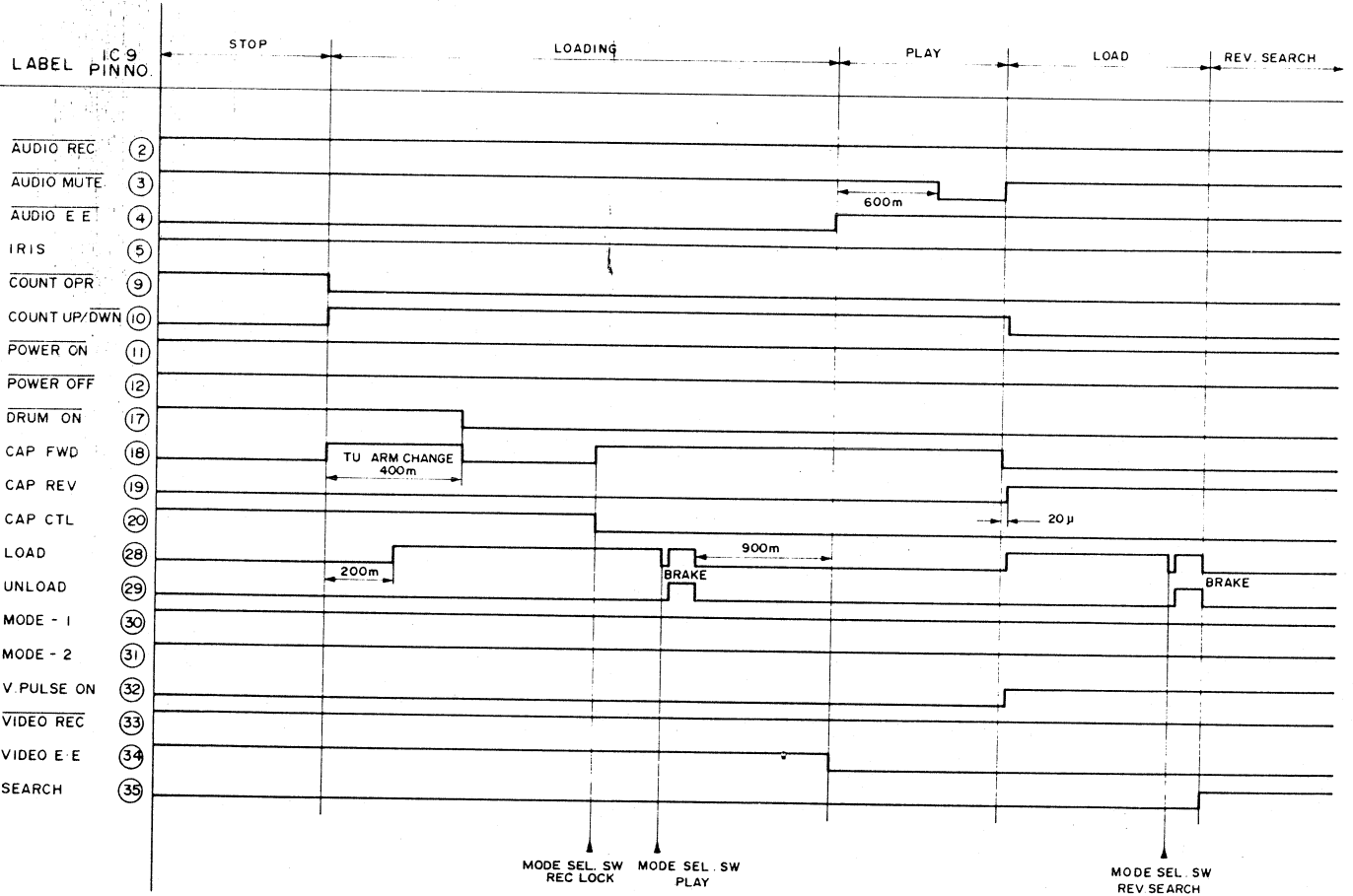
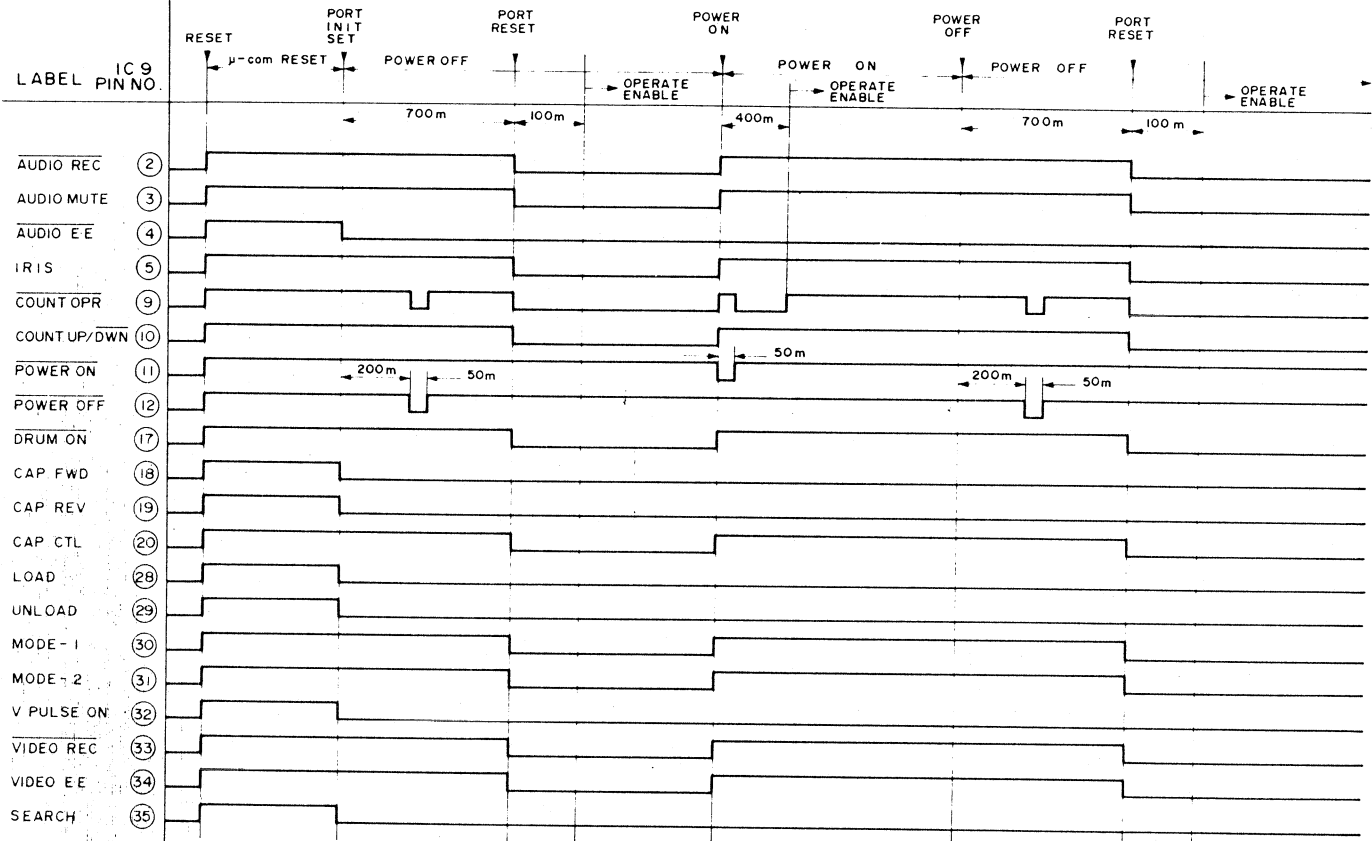
Mechaniksteuerung Blockschaltbild Mechacon block diagram



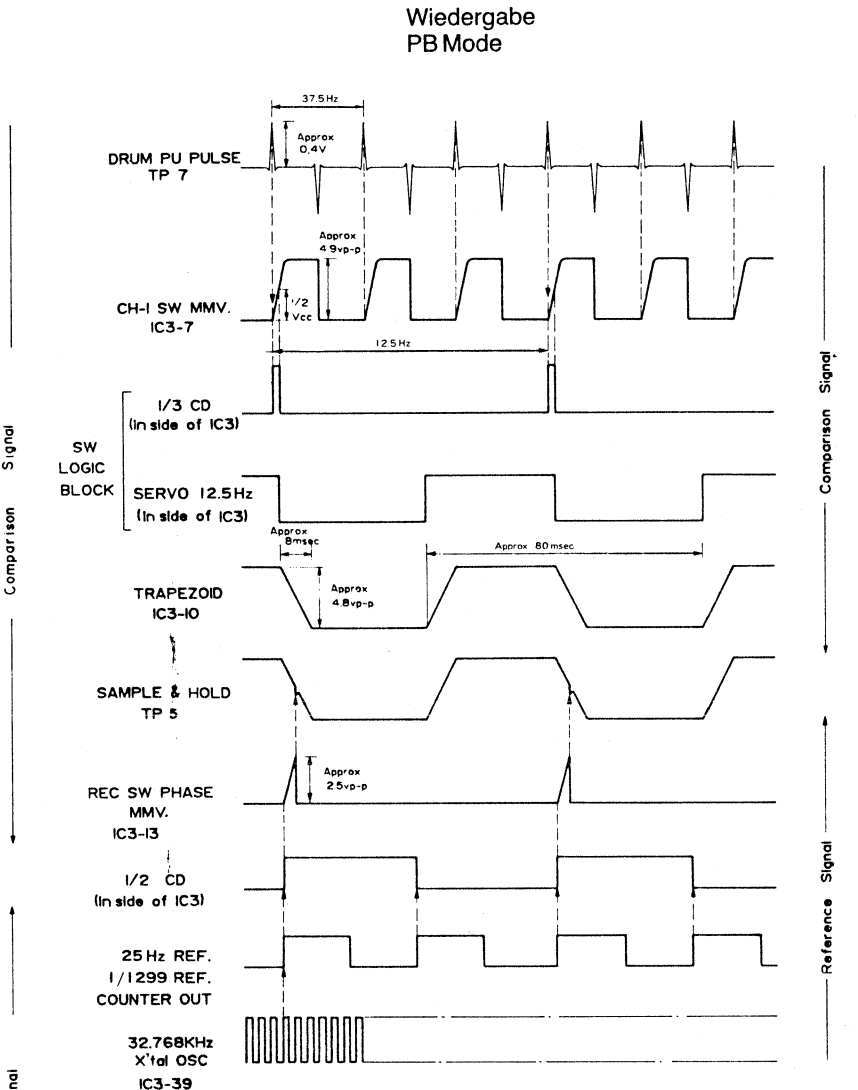
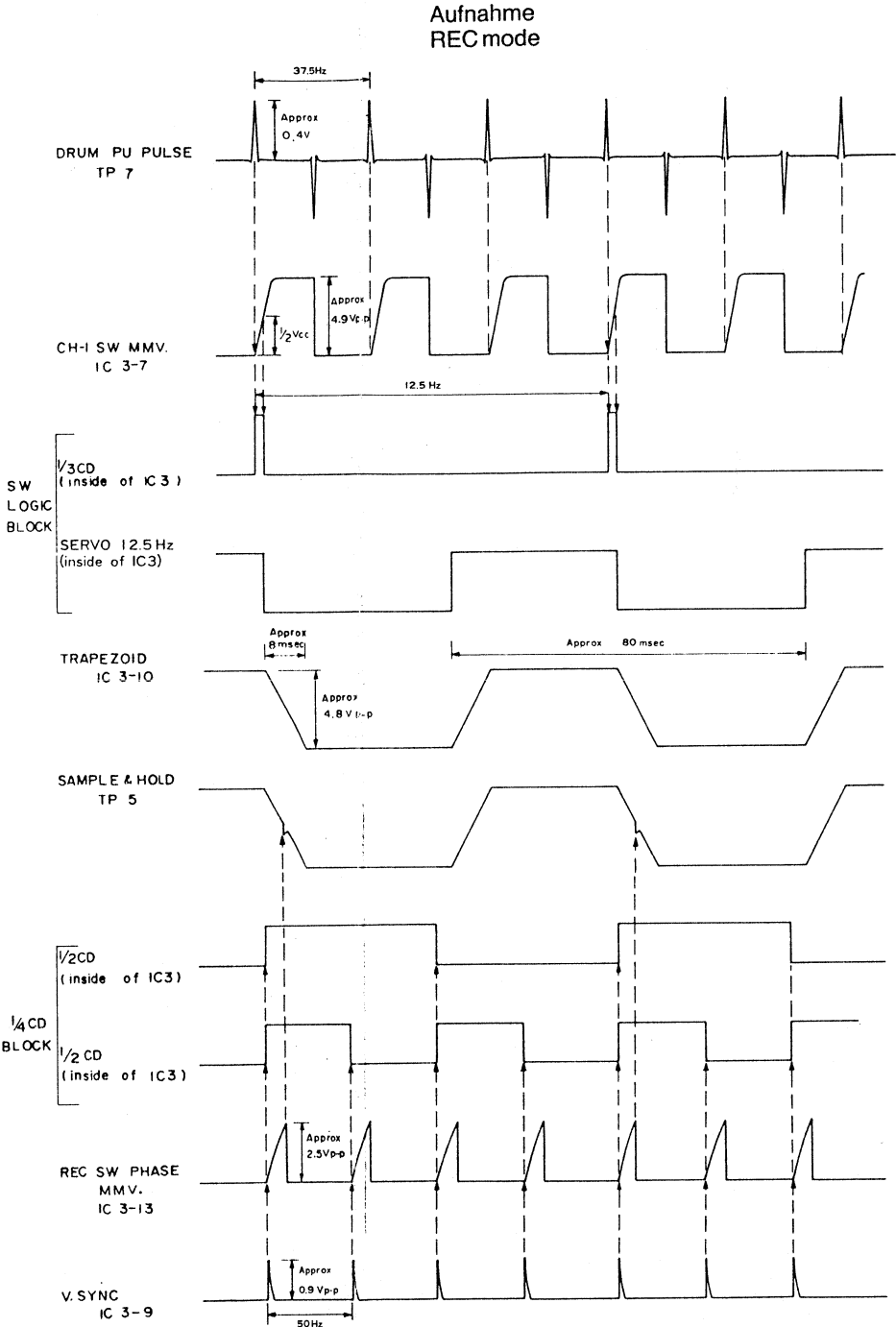
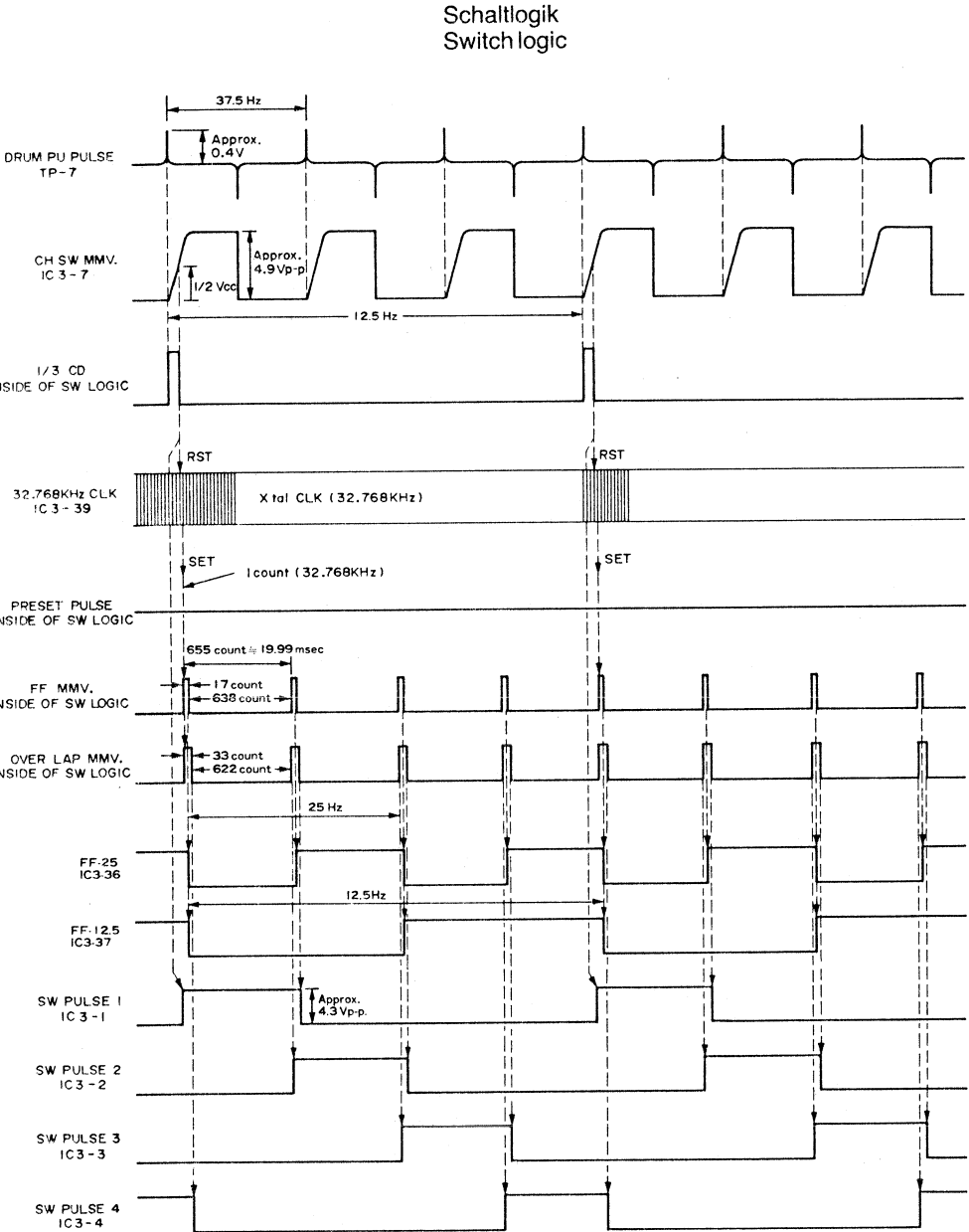
Mechaniksteuerung Blockschaltbild Mechacon block diagram



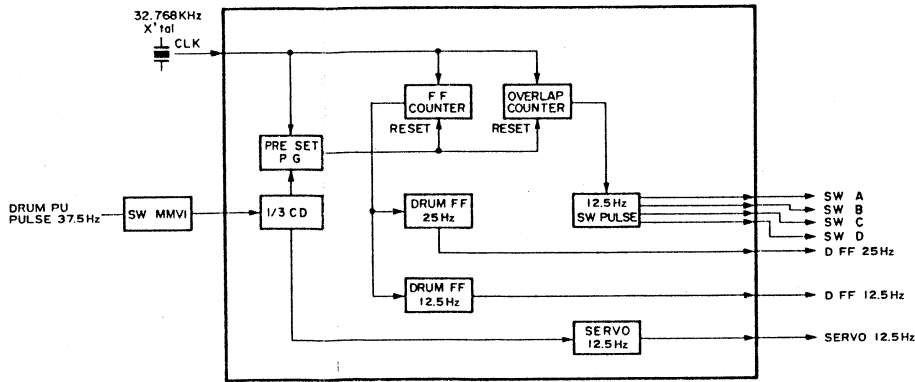
Mechaniksteuerung Impulsdiagramm
Mechacon timing chart

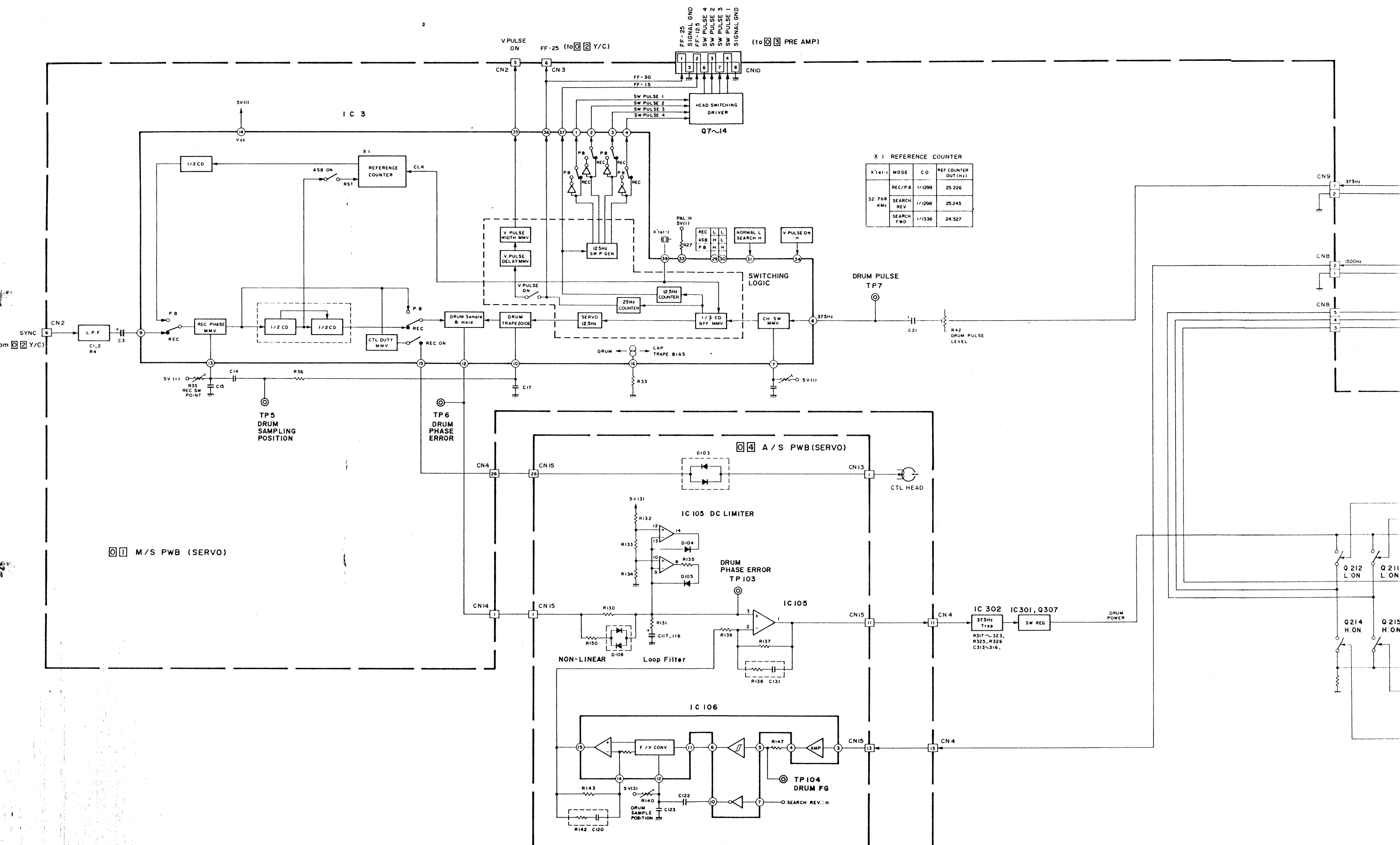


Kopftrommelservo Impulsdiagramm
Drum servo timing chart



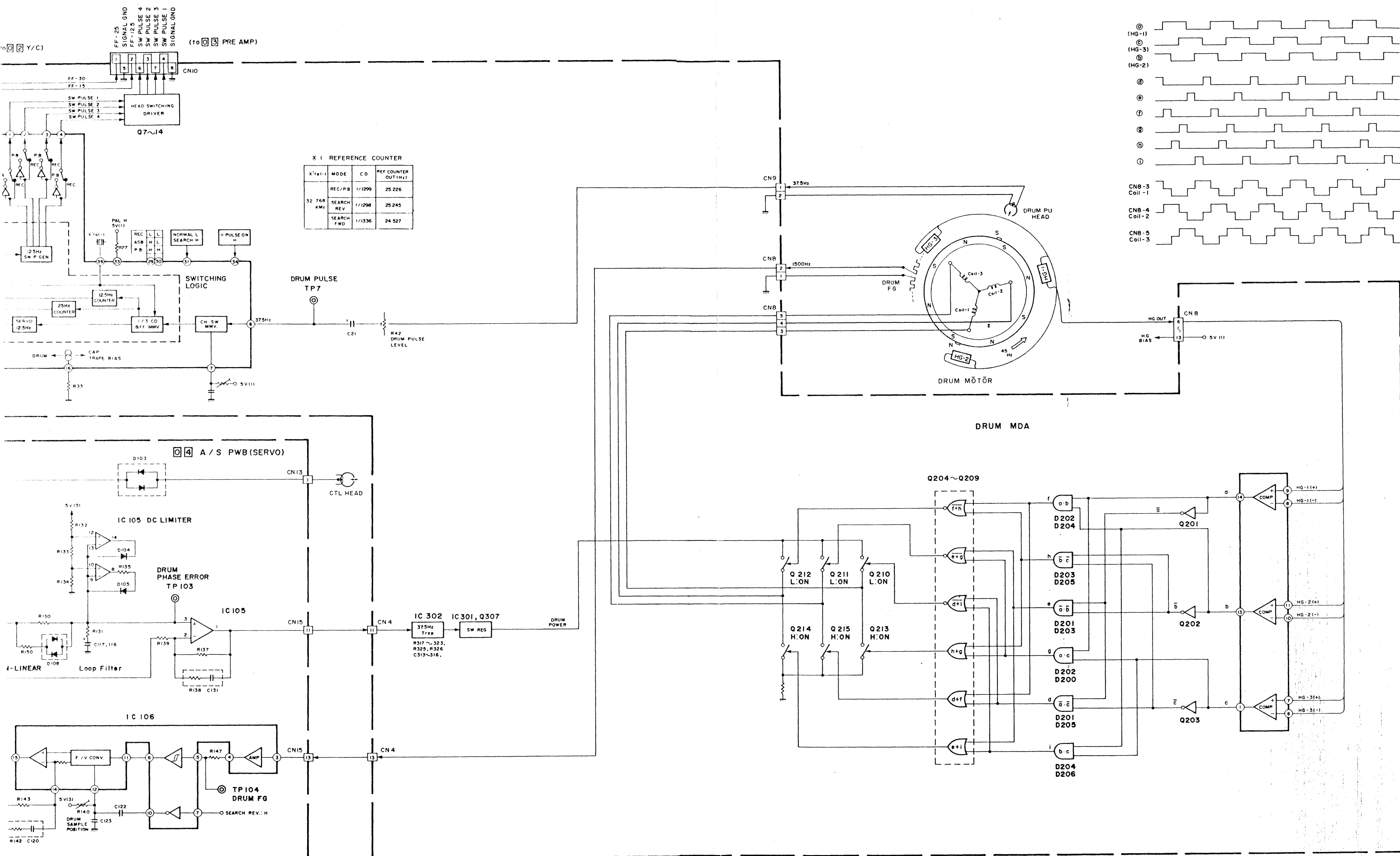
IC3 SWITCHING LOGIC BLOCK DIAGRAM

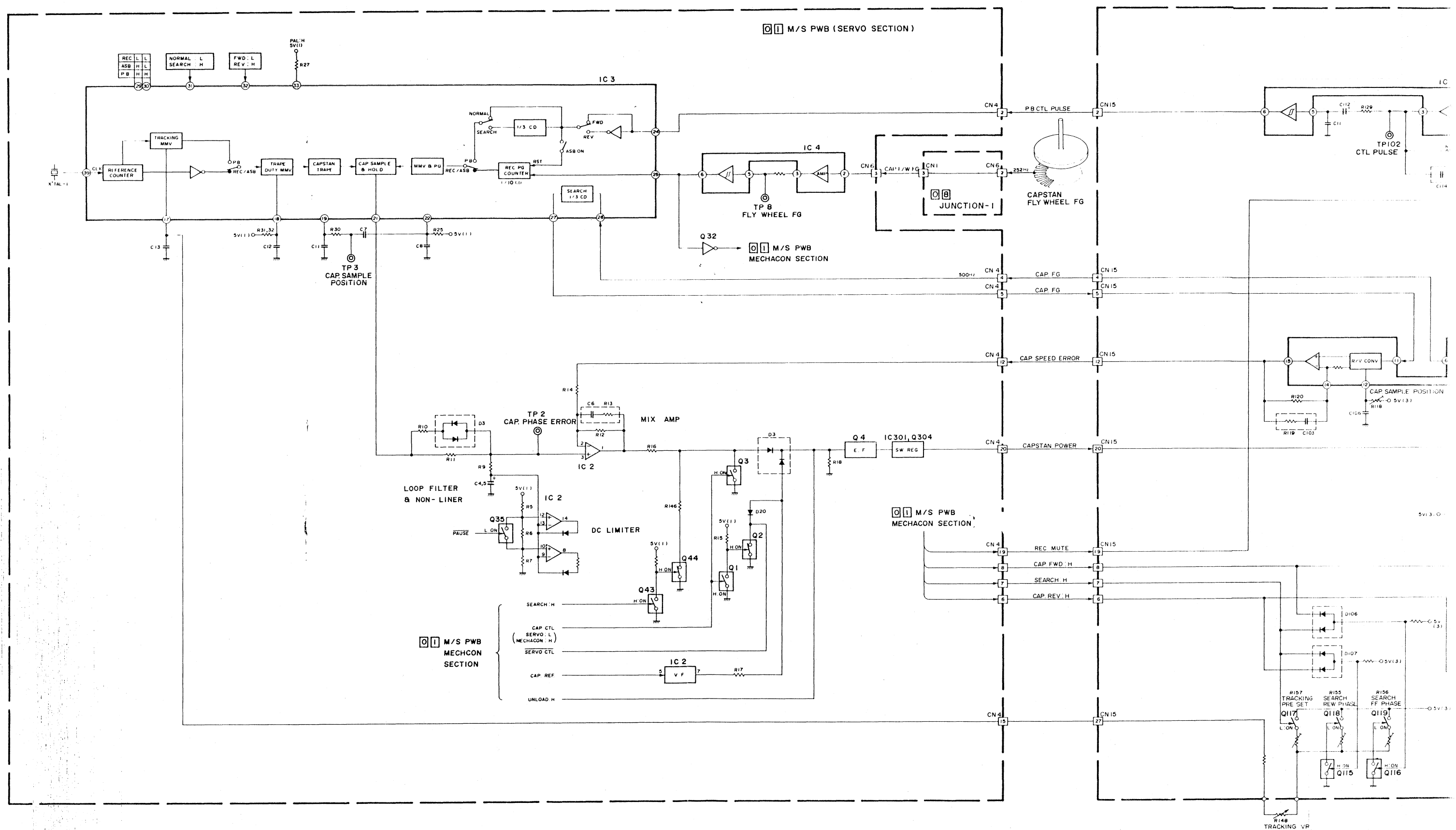




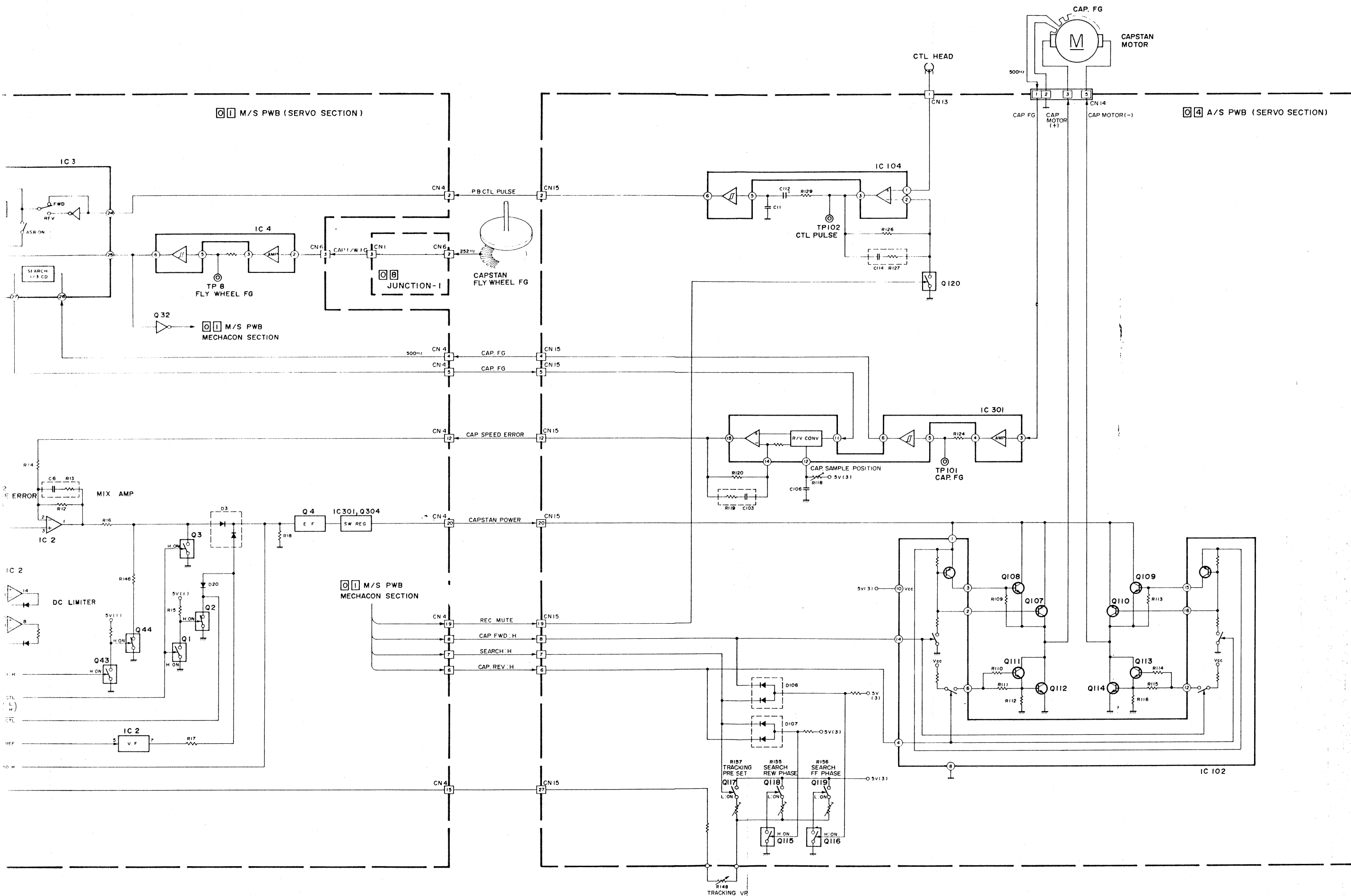
Kopftrommelservo Blockschaltbild

DRUM MDA TIMING CHART

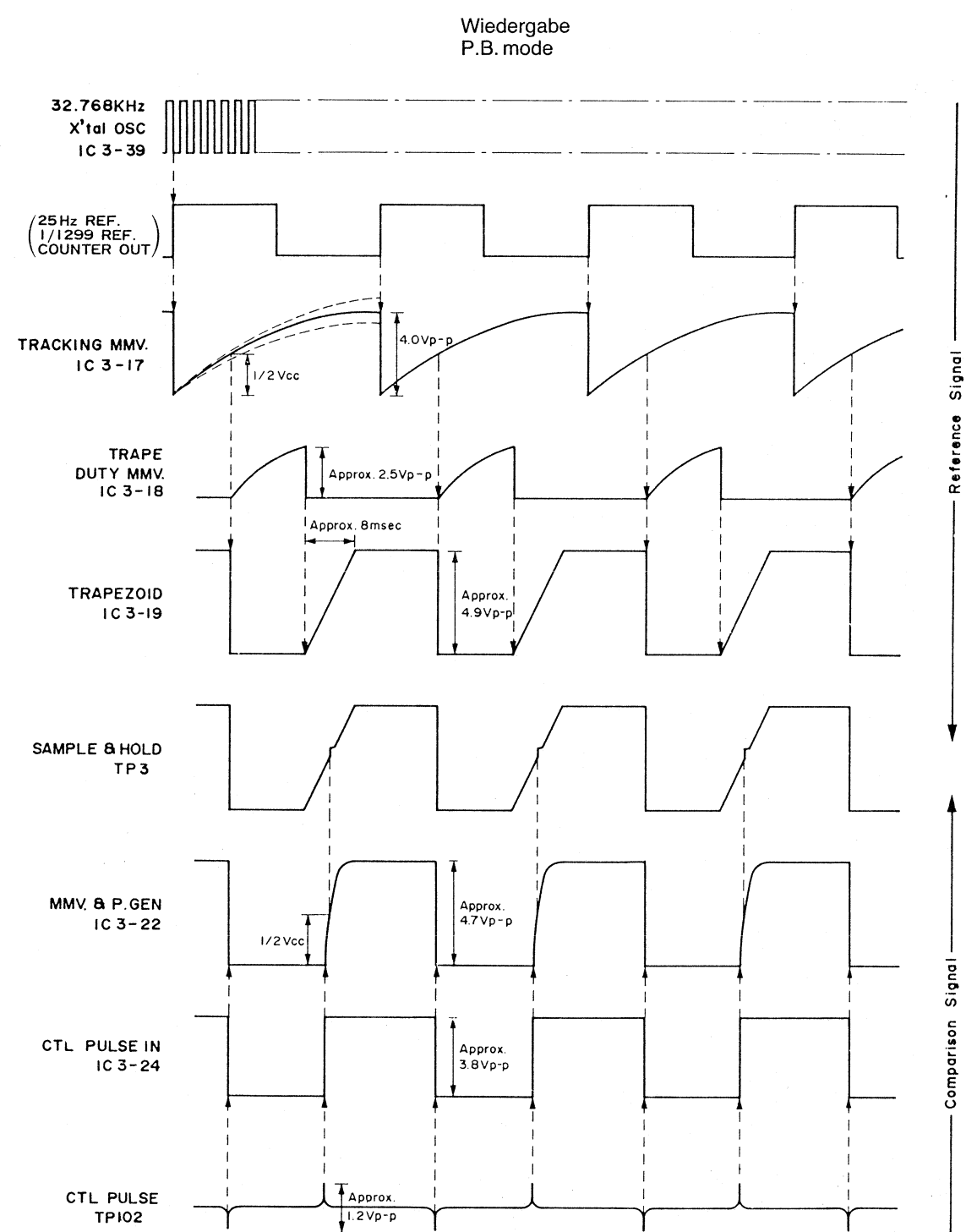
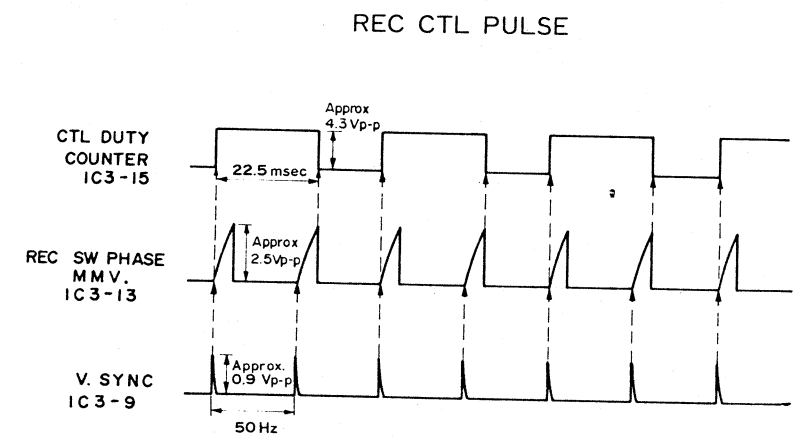
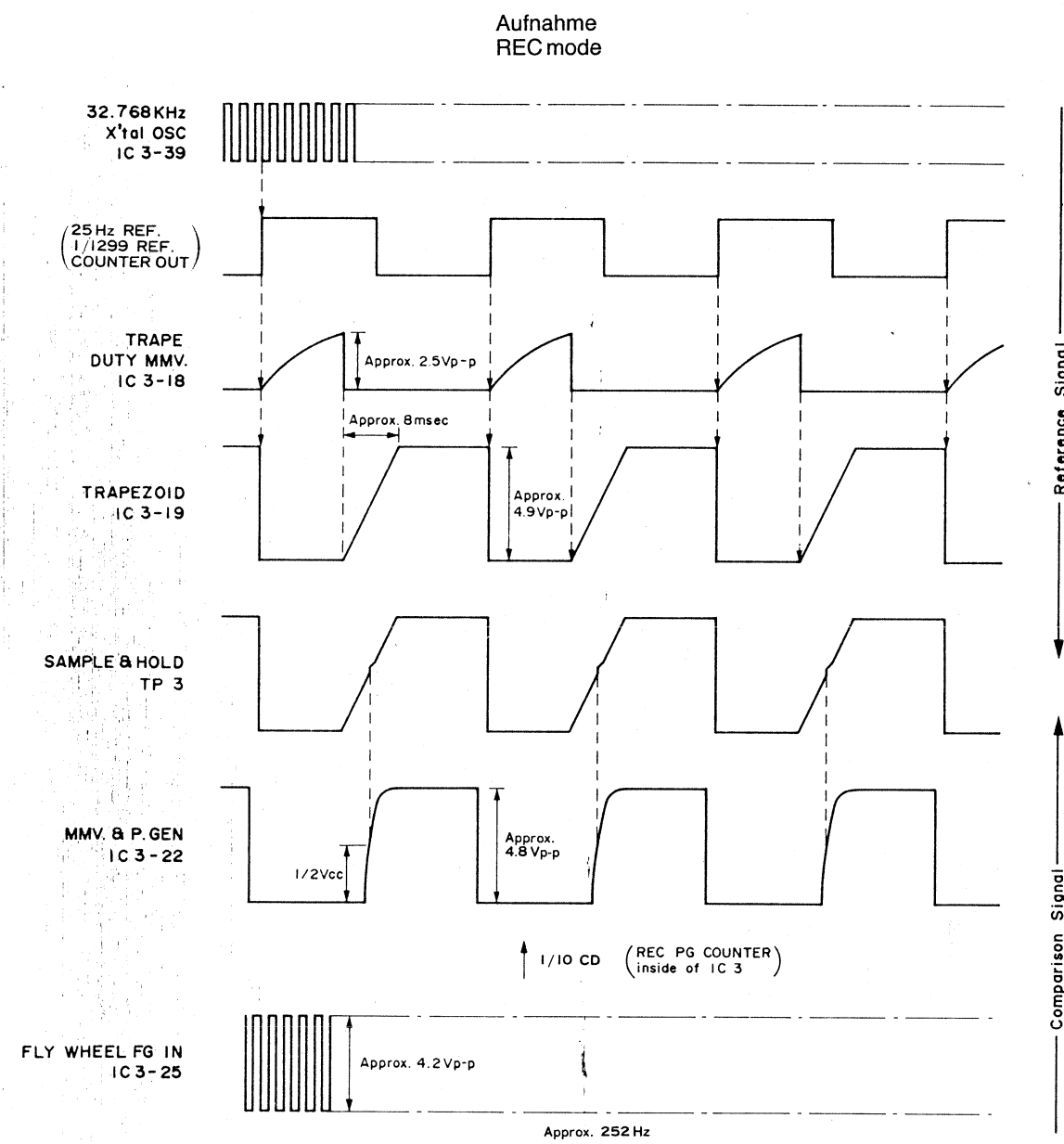




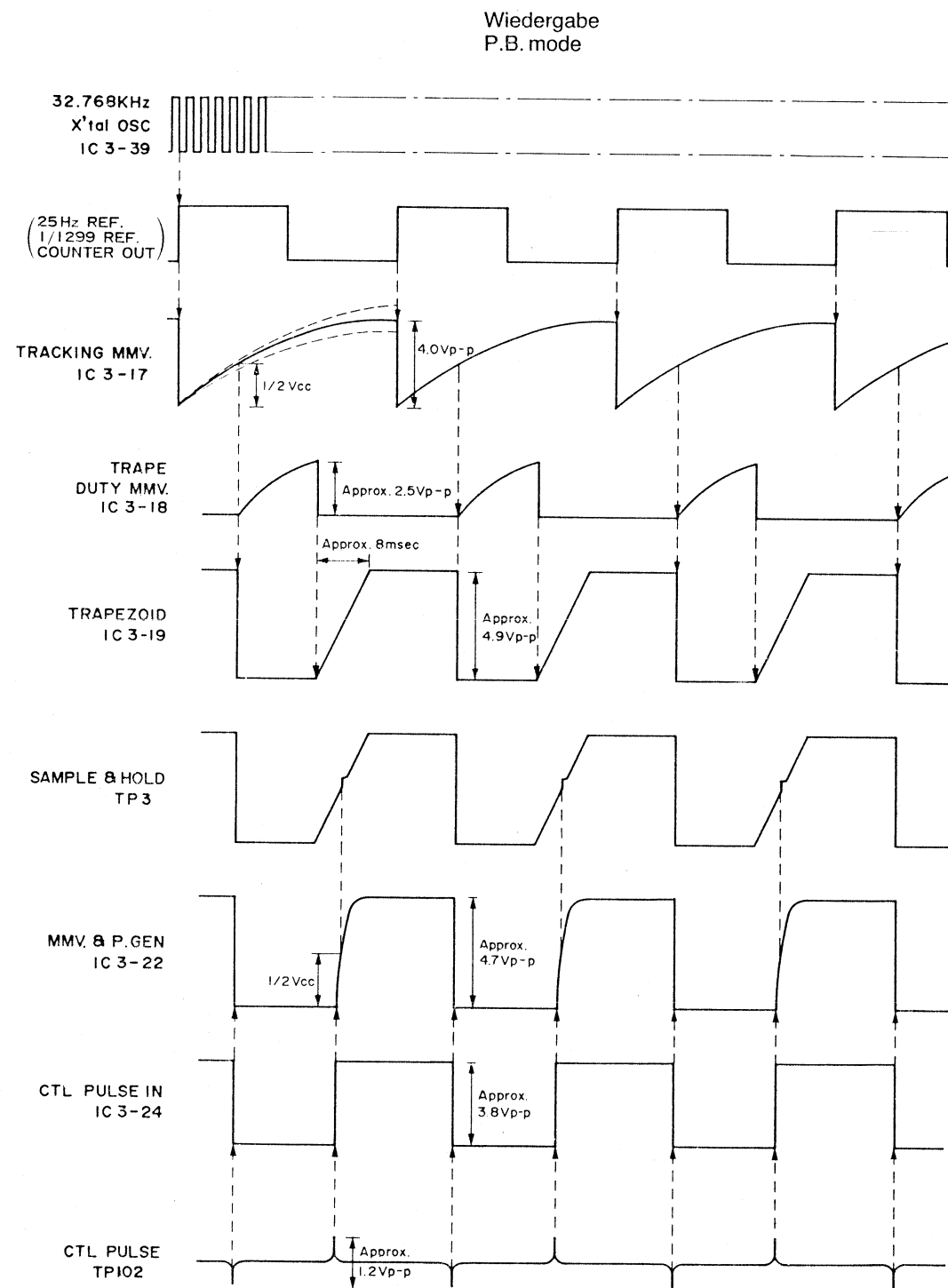
Capstanservo Blockschalbild



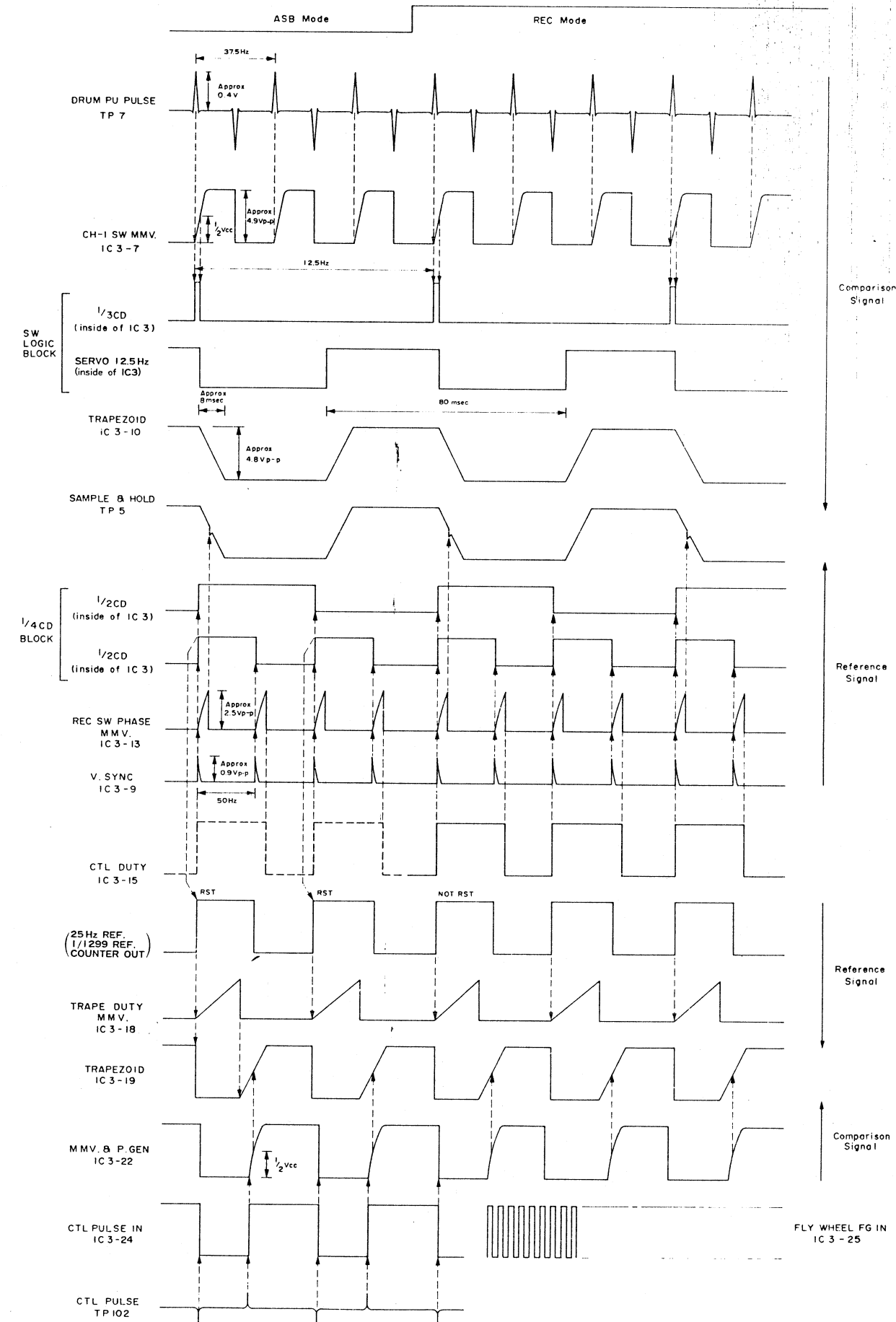
Capstanservo Impulsdiagramm
Capstan servo timing chart

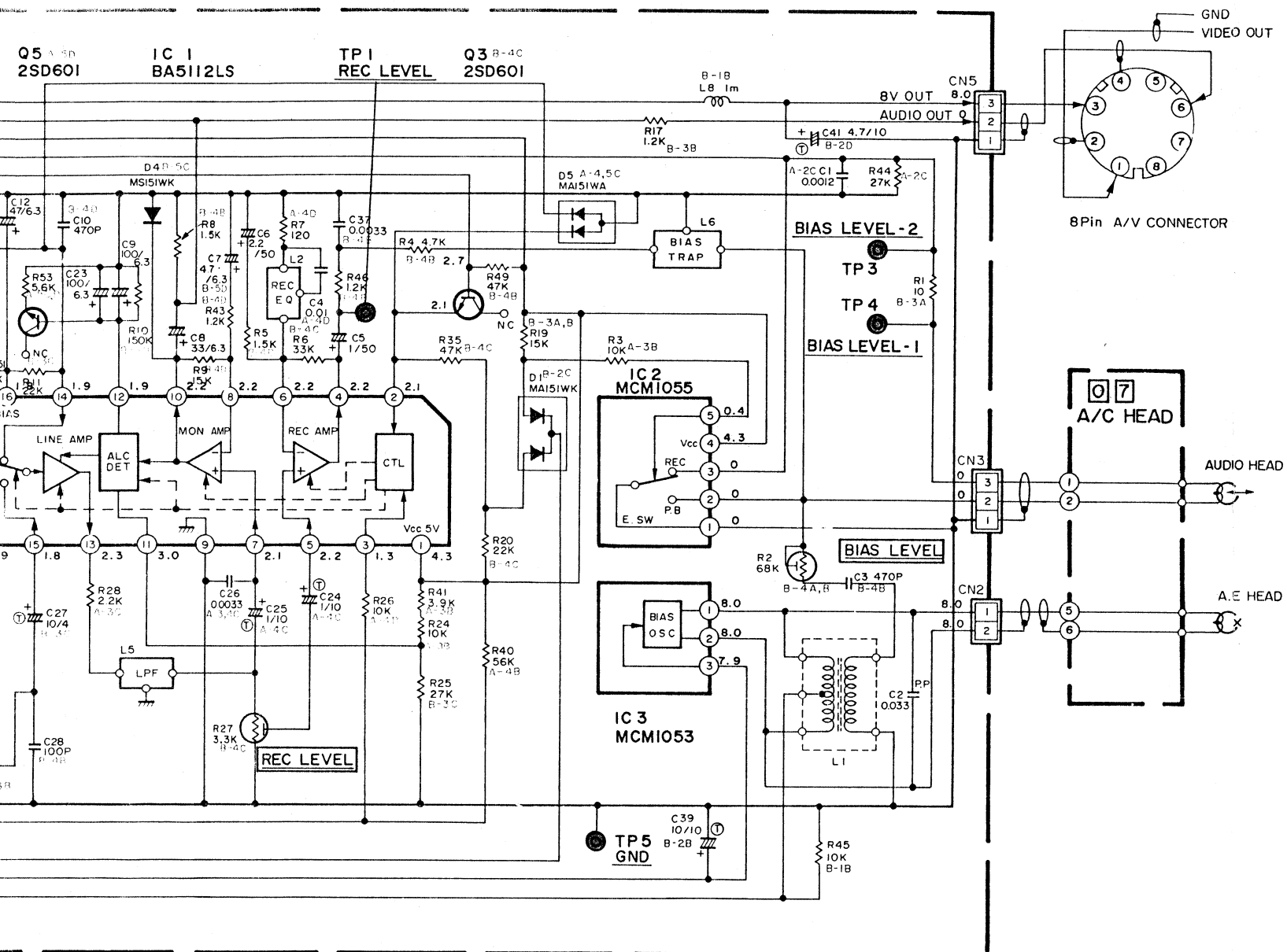


Reference Signal
Comparison Signal



Assemble-Schnitt Assembly mode





Audio-Schaltbild
Audio circuit diagram

IC1 CTL MODE

	REC	EE/REC MUTE	PB	PB MUTE
IC1 pin ② REC/PB CTL	L	L	H	H
IC1 pin ③ MUTE CTL	L	H	L	H
MIC AMP	ON	ON	ON	ON
PB EQ AMP	ON	ON	ON	ON
REC/PB SW	REC	REC	PB	PB
MON AMP	ON	ON	OFF	OFF
REC AMP	ON	OFF	OFF	OFF
LINE AMP	ON	ON	OFF	OFF

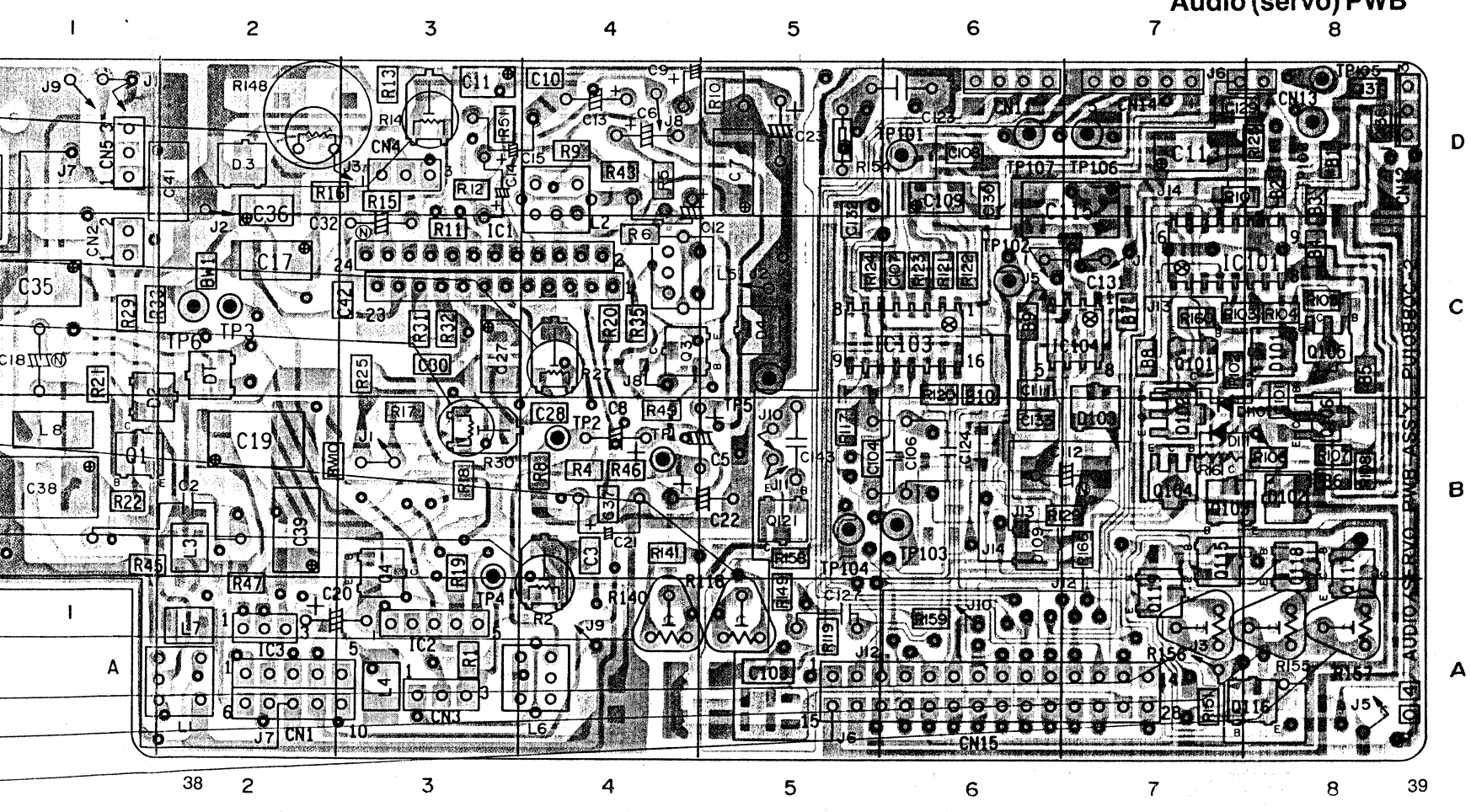
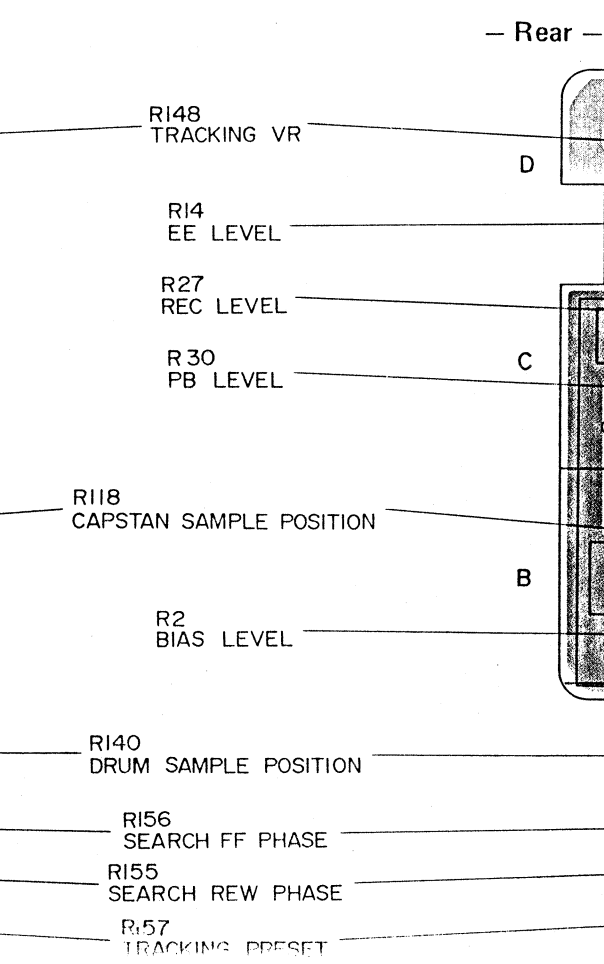
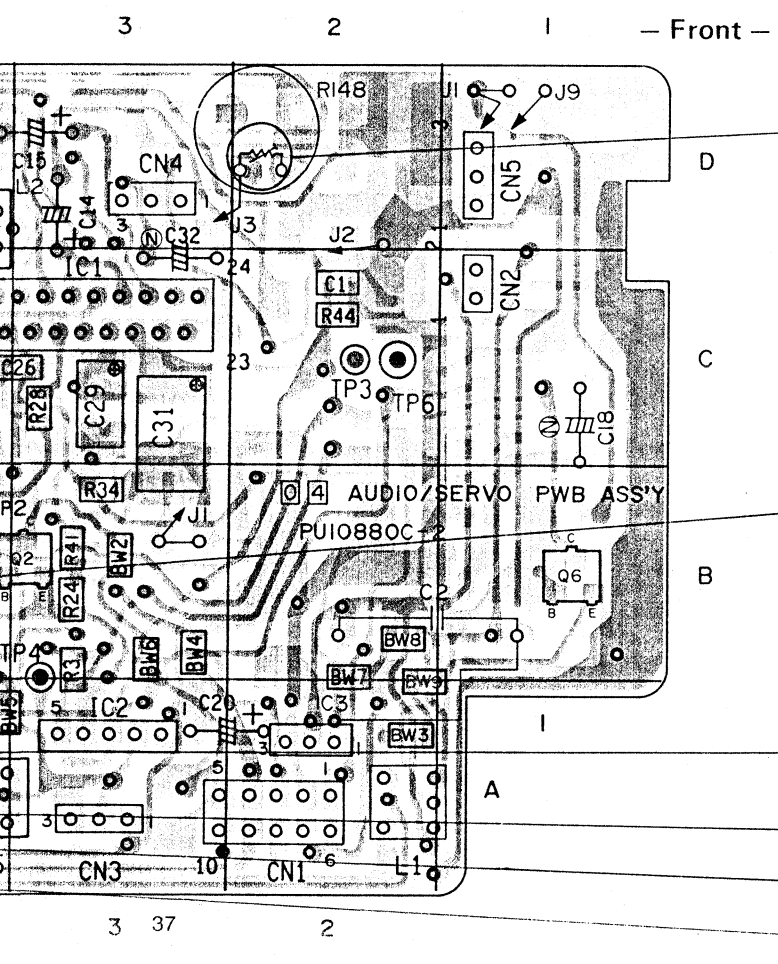
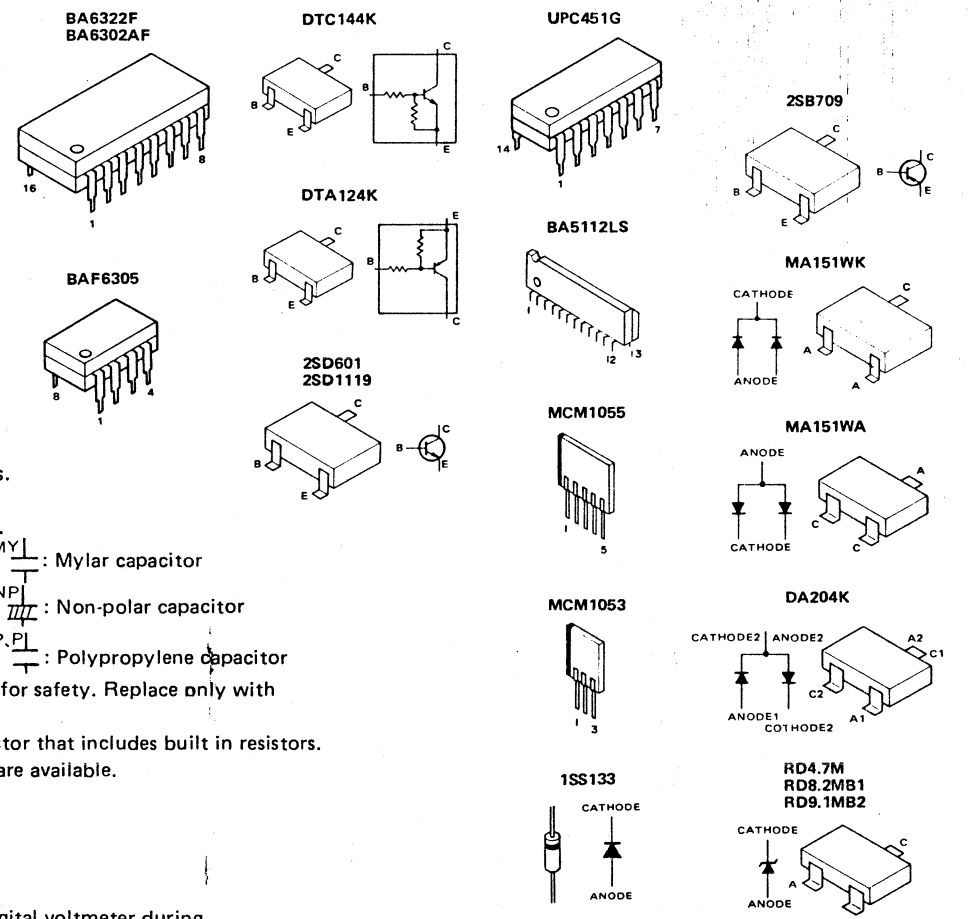
NOTES: Unless otherwise specified.

1. All resistance values are in ohms.
 2. All inductance values are in H.
 3. All capacitance values are in μF .
- \square : Chip capacitor
 $\text{---} \text{---} \text{---}$: Electrolytic capacitor
 $\text{---} \text{---} \text{---}$: Tantalum capacitor
 $\text{---} \text{---} \text{---}$: Mylar capacitor
 $\text{---} \text{---} \text{---}$: Non-polar capacitor
 $\text{---} \text{---} \text{---}$: Polypropylene capacitor
4. Shaded () parts are critical for safety. Replace only with specified part numbers.
 5. The digital transistor is a transistor that includes built in resistors. Both PNP and NPN transistors are available.

6. DC voltages are measured with a digital voltmeter during stop mode without a signal.

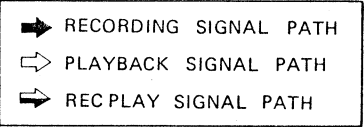
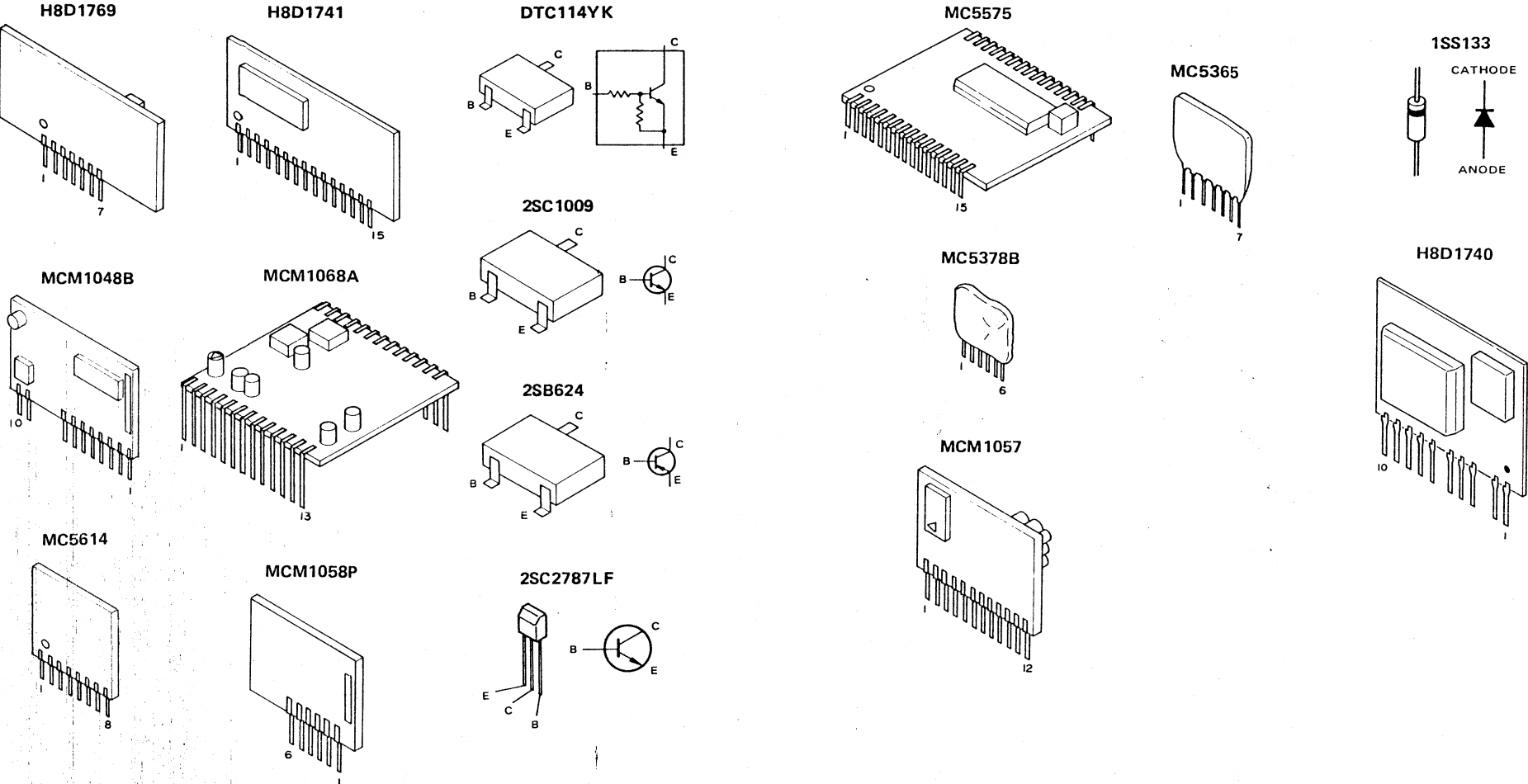
Hinweis:

1. Alle Gleichspannungen sind mit einem Digital-Voltmeter im Stop-Betrieb ohne Signal gemessen.
2. Bauteile in den schattierten Flächen sind Sicherheits-Bauteile! Nur gegen Original-Ersatzteile austauschen!



04 Audio (Servo)-Platte
Audio (servo) PWB

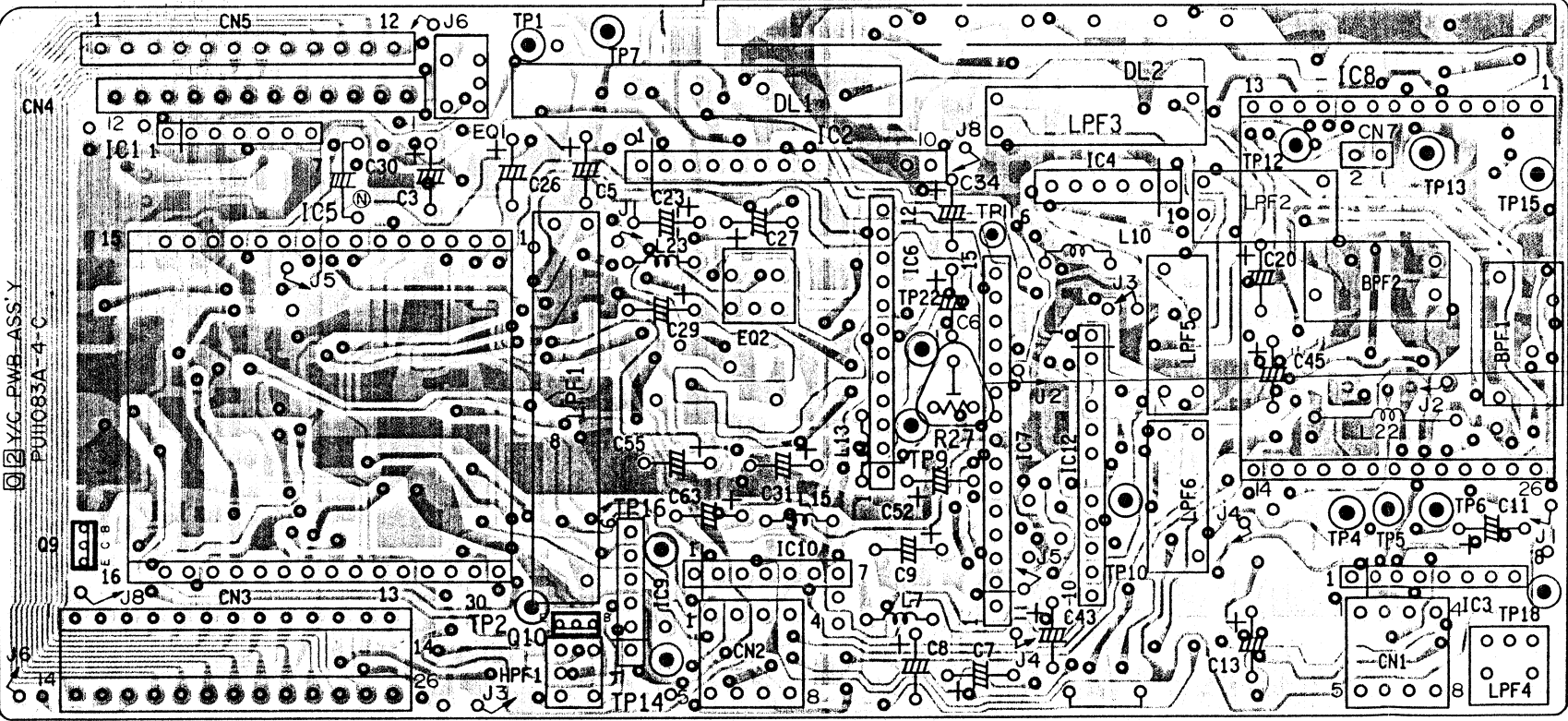
**0 2 Video-Platte (Recorder)
Video PWB (tape recorder)**



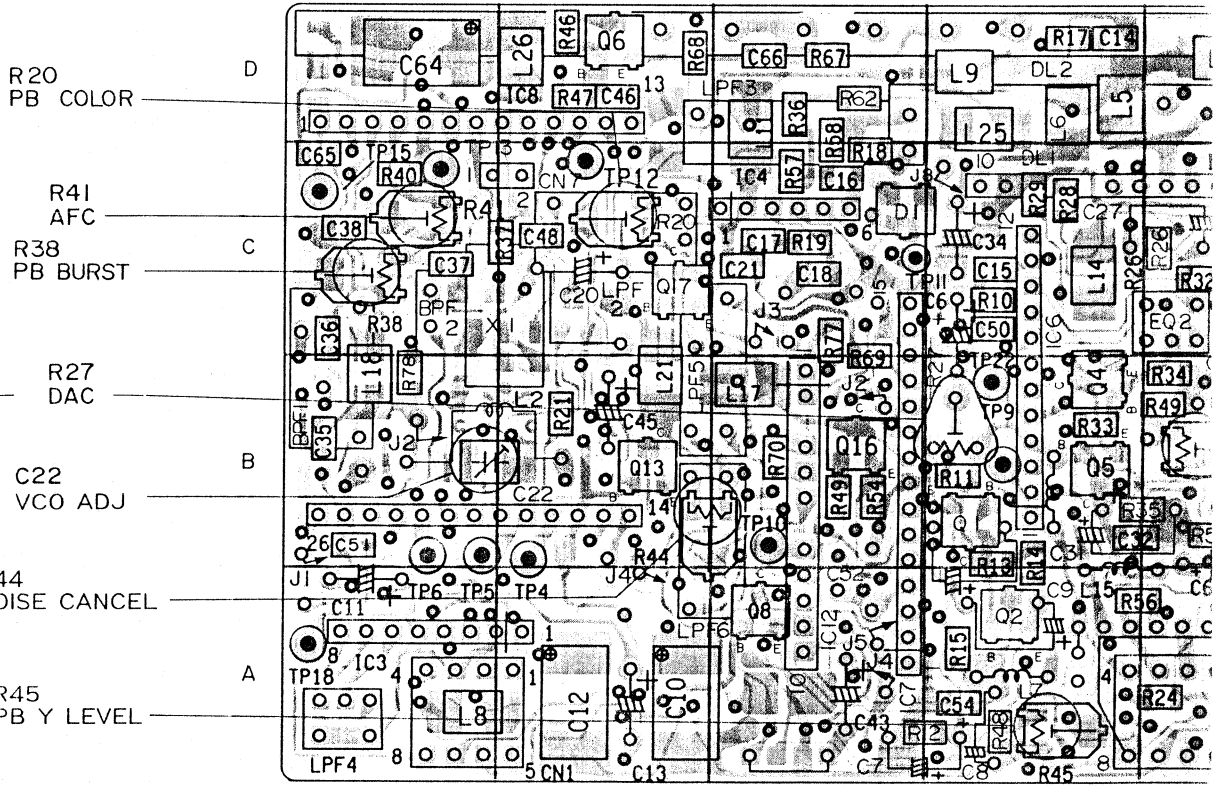
- NOTES:** Unless otherwise specified.
- All resistance values are in ohms.
 - All inductance values are in H.
 - All capacitance values are in μF .
- \square : Chip capacitor
 \square : Non-polar capacitor
 \square : Polypropylene capacitor
 \square : Electrolytic capacitor
 \square : Tantalum capacitor
 \square : Mylar capacitor
- Shaded () parts are critical for safety. Replace only with specified part numbers.
 - The digital transistor that includes built in resistors. Both PNP and NPN transistors are available.
6. DC voltages are measured with a digital voltmeter during recording mode.
 7. Where voltage differs between recording and play-back, the voltage during play-back is shown in parentheses.
 8. Wave forms
 Recording : Measured by using "Y/C SEPARATOR" with color bar signal input.
 Play-back : Measured during play-back of color bar segment of Alignment Tape.

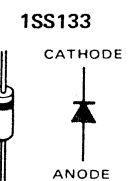
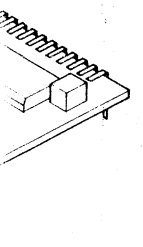
- Hinweis:**
- Alle Gleichspannungen sind mit einem Digital-Voltmeter im Aufnahmebetrieb gemessen.
 - Ergeben sich im Wiedergabe-Betrieb andere Spannungen, so sind diese in Klammern angegeben.
 - Bauteile in den schattierten Flächen sind Sicherheitsbauteile! Nur gegen Original-Ersatzteile wechseln!

– Front –

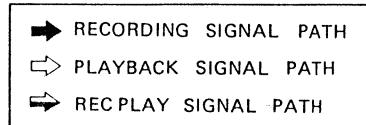
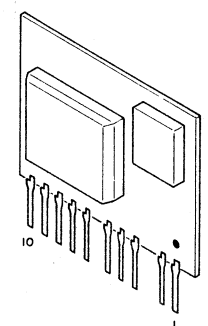


– Rear –





H8D1740



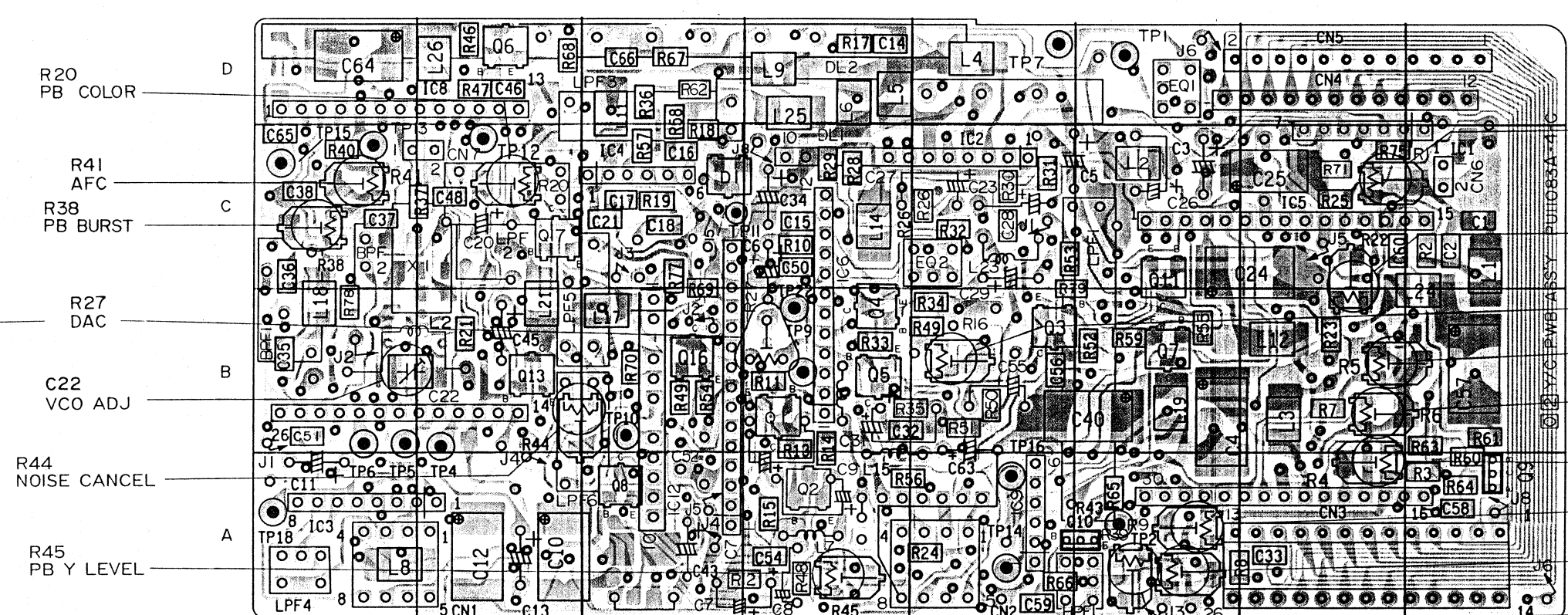
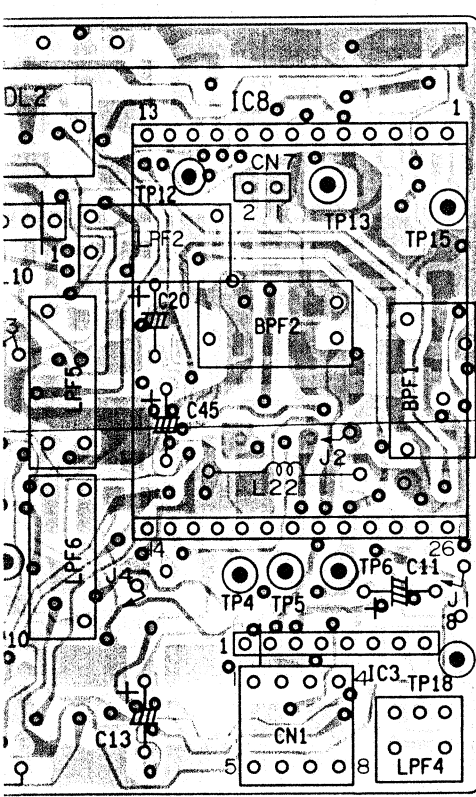
- NOTES: Unless otherwise specified.
1. All resistance values are in ohms.
 2. All inductance values are in H.
 3. All capacitance values are in μ F.
- : Chip capacitor
 : Non-polar capacitor
 : Polypropylene capacitor
 : Electrolytic capacitor
 : Tantalum capacitor
 : Mylar capacitor
4. Shaded () parts are critical for safety. Replace only with specified part numbers.
 5. The digital transistor that includes built in resistors. Both PNP and NPN transistors are available.
- : DC voltage measurement
 : Wave form
6. DC voltages are measured with a digital voltmeter during recording mode.
 7. Where voltage differs between recording and play-back, the voltage during play-back is shown in parentheses.
 8. Wave forms
- Recording: Measured by using "Y/C SEPARATOR" with color bar signal input.
 Play-back: Measured during play-back of color bar segment of Alignment Tape.

- Hinweis:
1. Alle Gleichspannungen sind mit einem Digital-Voltmeter im Aufnahmebetrieb gemessen.
 2. Ergeben sich im Wiedergabe-Betrieb andere Spannungen, so sind diese in Klammern angegeben.
 3. Bauteile in den schattierten Flächen sind Sicherheitsbauteile! Nur gegen Original-Ersatzteile wechseln!

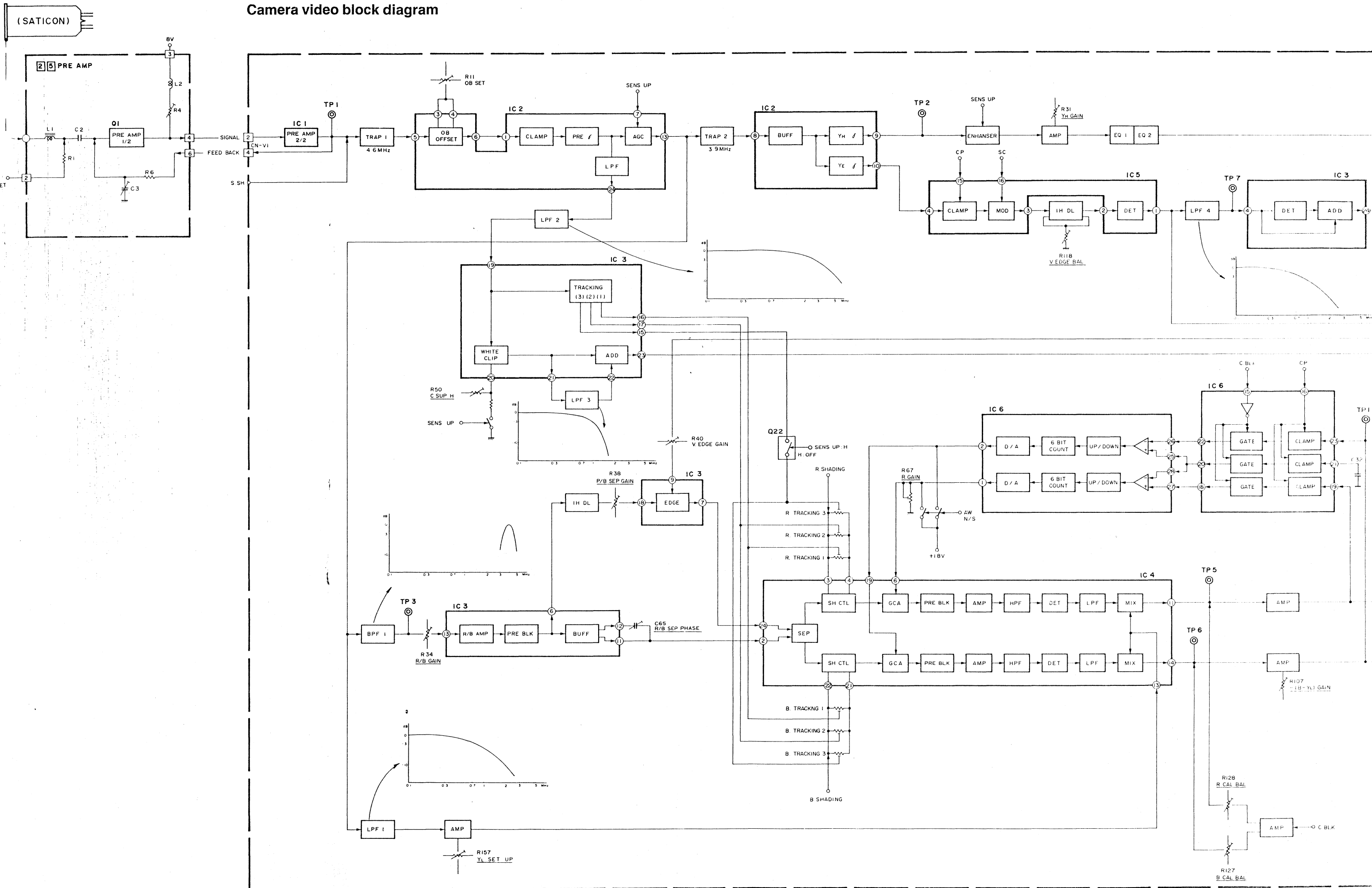
 W1 CN6 pin ② Y IN 1 Vp-p REC	 W2 TP23 CHROMA IN BARST 0.2 Vp-p REC	 W3 TP1 PB FM 0.28 Vp-p PB	 W4 TP2 EMPHASIS 0.64 Vp-p PB	 W5 TP18 VIDEO OUT 2 Vp-p PB	 W6 TP4 VCO 0.5 Vp-p PB
 W7 TP5 VCO OUT 0.9 Vp-p	 W8 TP6 PB COLOR 0.2 Vp-p PB	 W9 TP22 Y AMP IN 0.24 Vp-p REC 0.48 Vp-p PB	 W10 TP9 DYAC 0.28 Vp-p REC	 W11 IC7 pin ⑭ 2nd LMT IN 0.5 Vp-p PB	 W12 TP12 0.55 Vp-p PB/REC
 W13 TP14 REC COLOR 75 mVp-p REC	 W14 TP15 AFC ERROR 2.6 V DC PB	 W15 IC5 pin ⑭ FM MOD OUT 0.8 Vp-p REC	 W16 TP16 REC FM 3.6 Vp-p REC	 W17 IC5 pin ⑥ PB AMP-1 IN 0.36 Vp-p PB	 W18 CN 1 pin ⑧ B/W OUT 2 Vp-p PB
 W19 CN1 pin ① FF 25 4.0 Vp-p	 W20 CN 1 pin ② FF 12.5 3.8 Vp-p	 W21 CN 1 pin ⑥ SW PULSE 4 7.3 Vp-p PB	 W21 CN1 pin ⑥ SW PULSE 4 7.3 Vp-p REC	 W22 CN1 pin ③ SW PULSE 2 7.3 Vp-p PB	 W22 CN1 pin ③ SW PULSE 2 7.3 Vp-p REC
 W23 CN1 pin ④ SW PULSE 1 7.3 Vp-p PB	 W23 CN1 pin ④ SW PULSE 1 7.3 Vp-p REC	 W24 CN1 pin ⑦ SW PULSE 3 7.3 Vp-p PB	 W24 CN1 pin ⑦ SW PULSE 3 7.3 Vp-p REC	 W25 TP10 NOISE CANCEL PB	

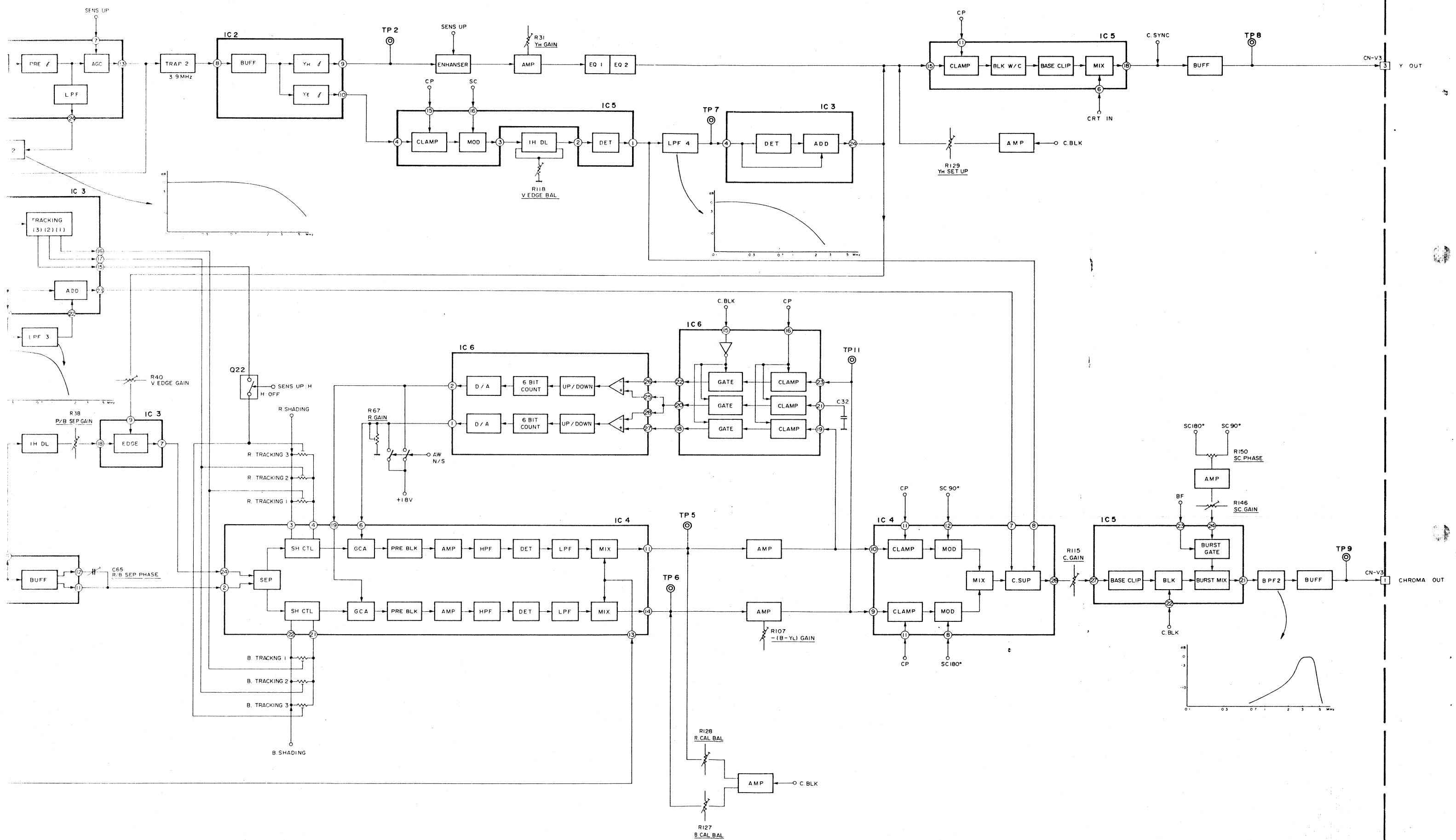
— Front —

— Rear —

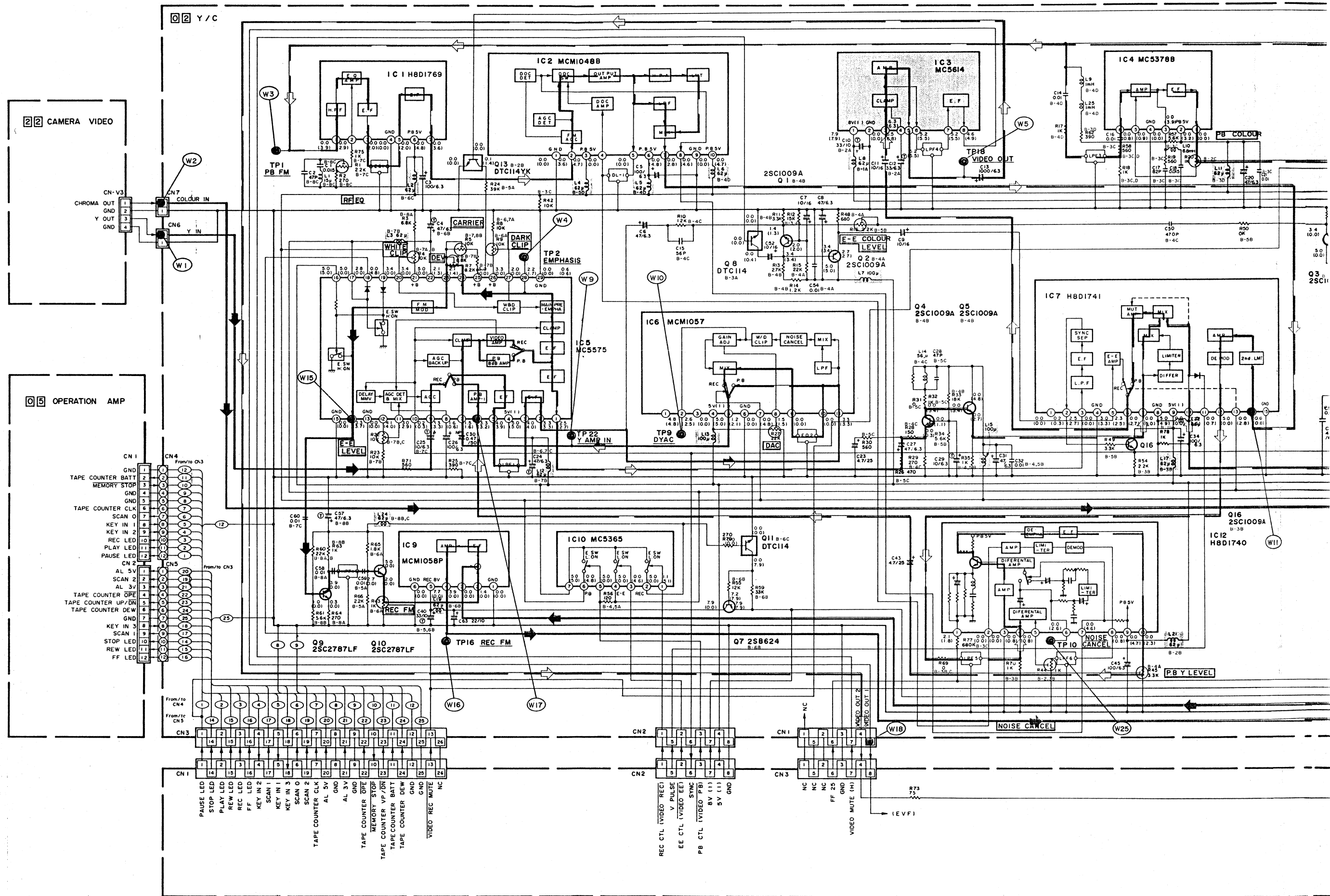


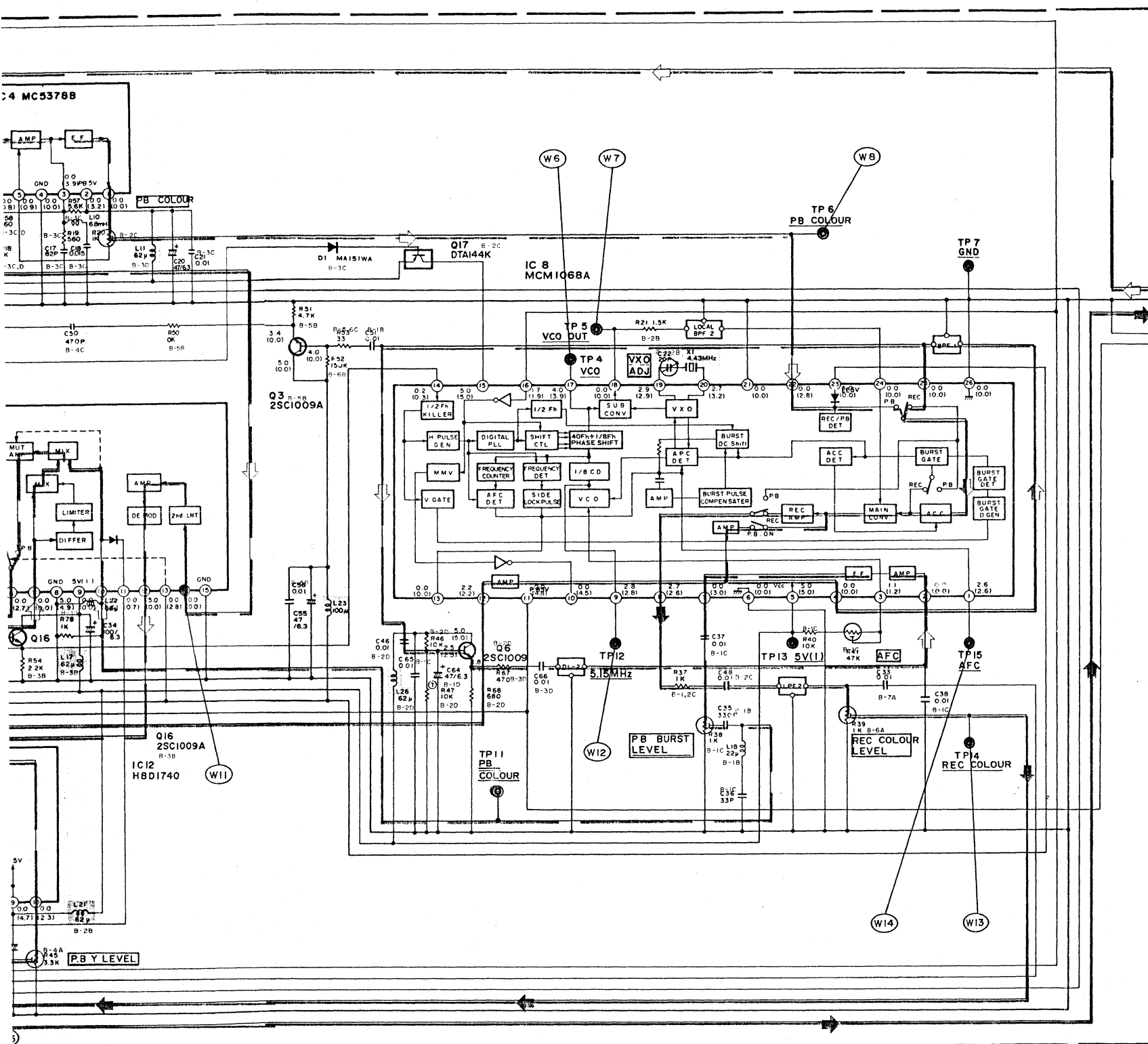
Camera Video Blockschaltbild Camera video block diagram



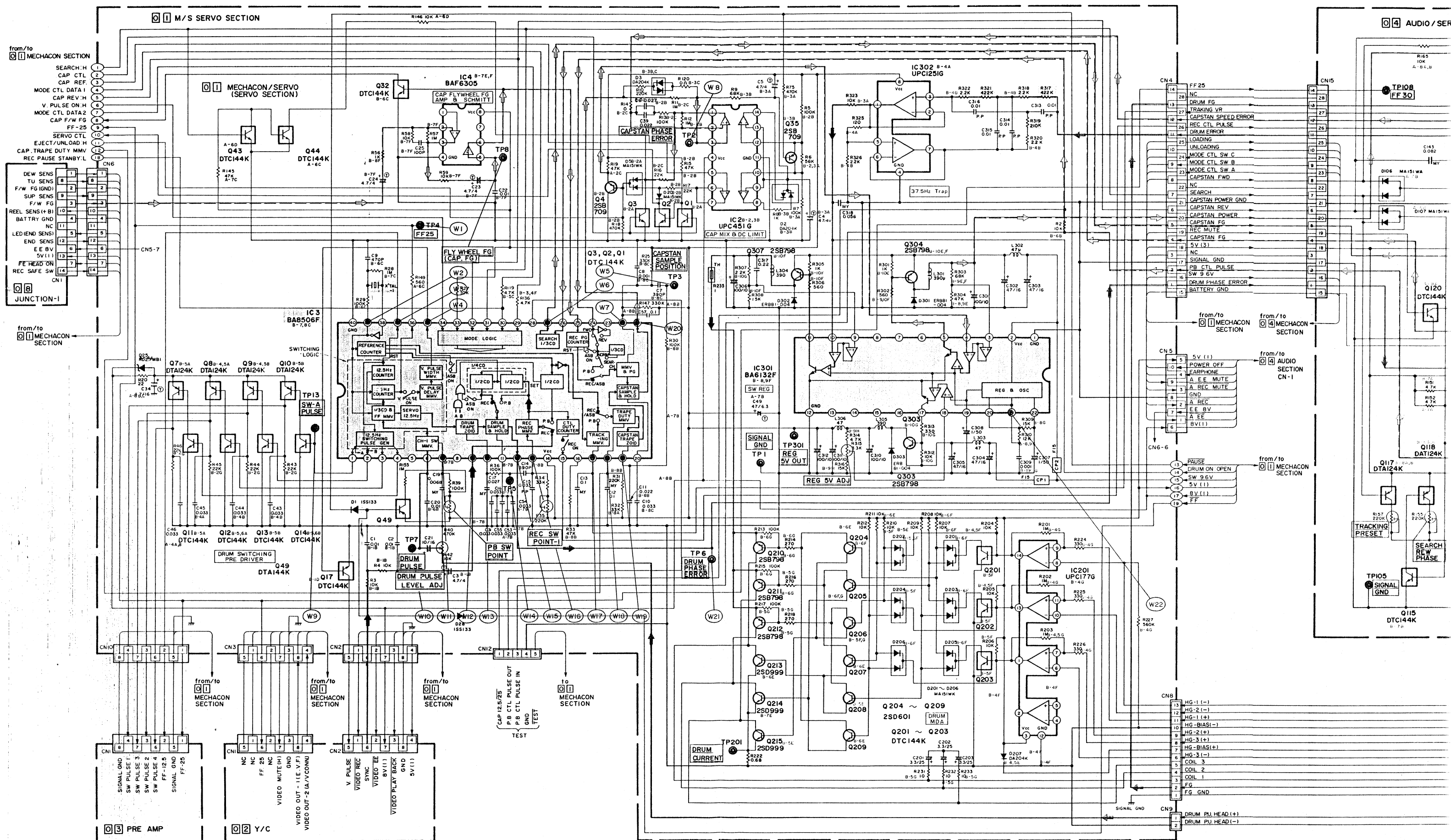


Video-Schaltbild (Recorder)
Video circuit diagram (tape recorder)

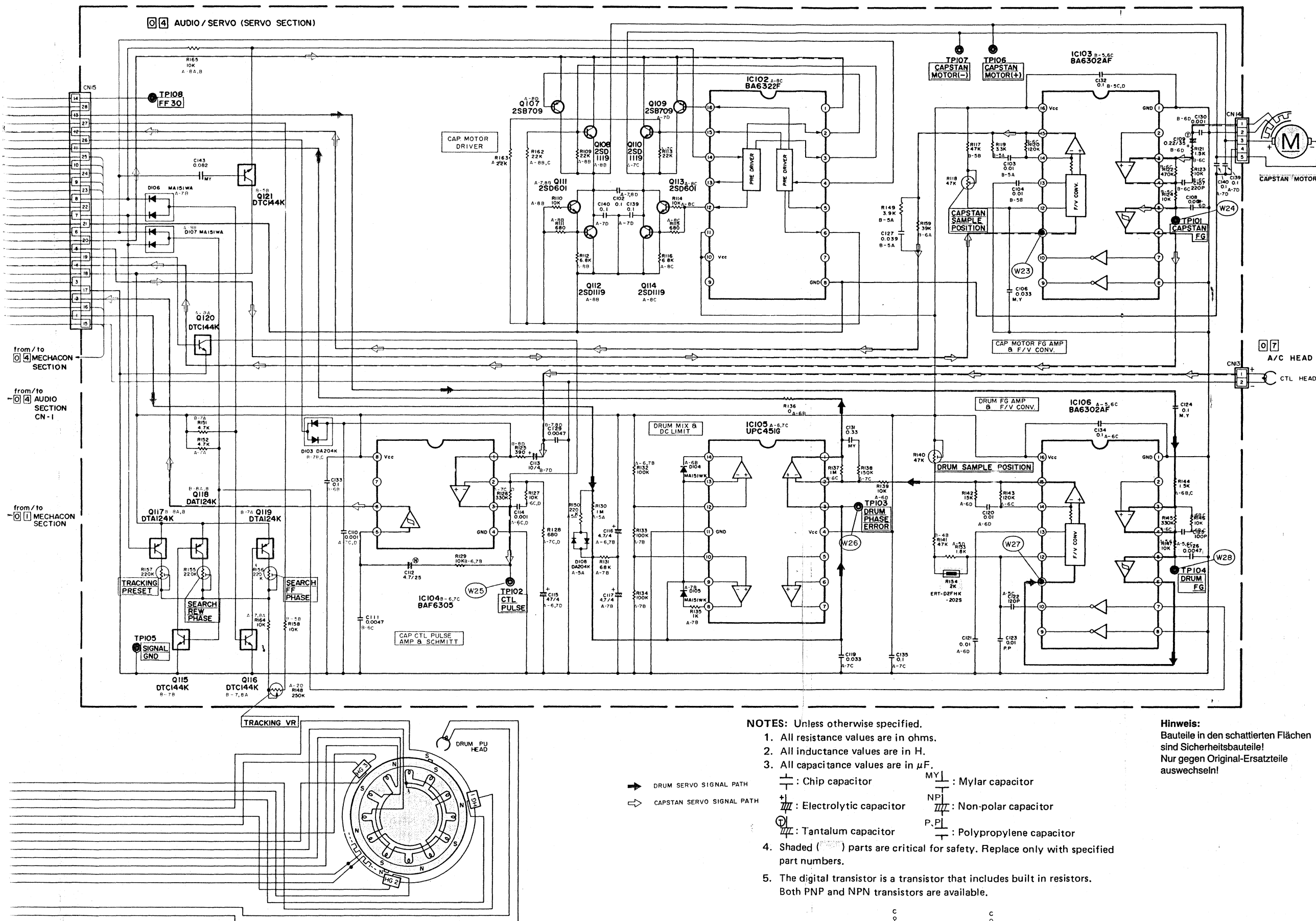




Servo-Regelung Schaltbild
Servo circuit diagram



Servo-Regelung Schaltbild Servo circuit diagram



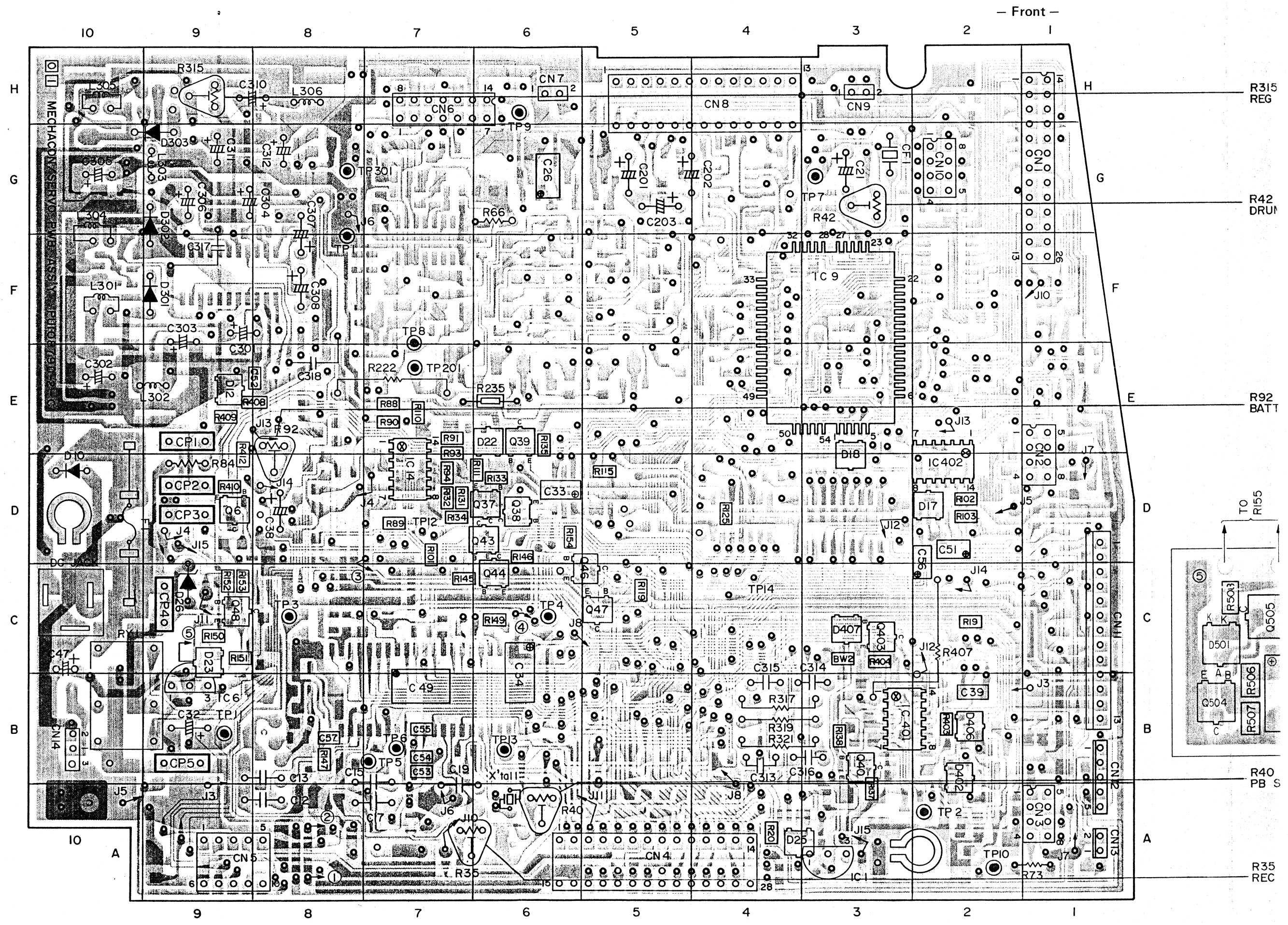
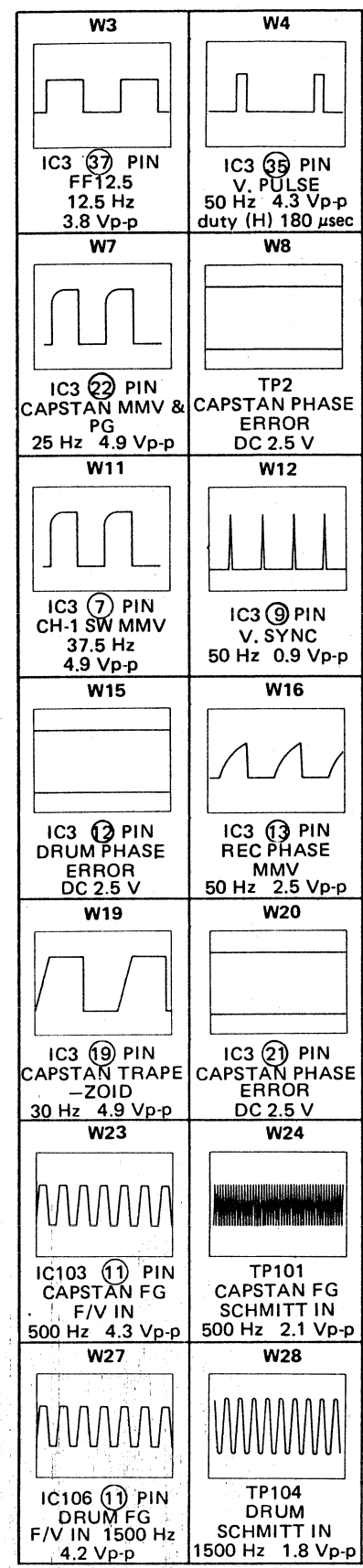
NOTES: Unless otherwise specified.

1. All resistance values are in ohms.
2. All inductance values are in H.
3. All capacitance values are in μF .
 \square : Chip capacitor
 \square : Electrolytic capacitor
 \square : Tantalum capacitor
 \square : Mylar capacitor
 \square : Non-polar capacitor
 \square : Polypropylene capacitor
4. Shaded () parts are critical for safety. Replace only with specified part numbers.
5. The digital transistor is a transistor that includes built in resistors. Both PNP and NPN transistors are available.

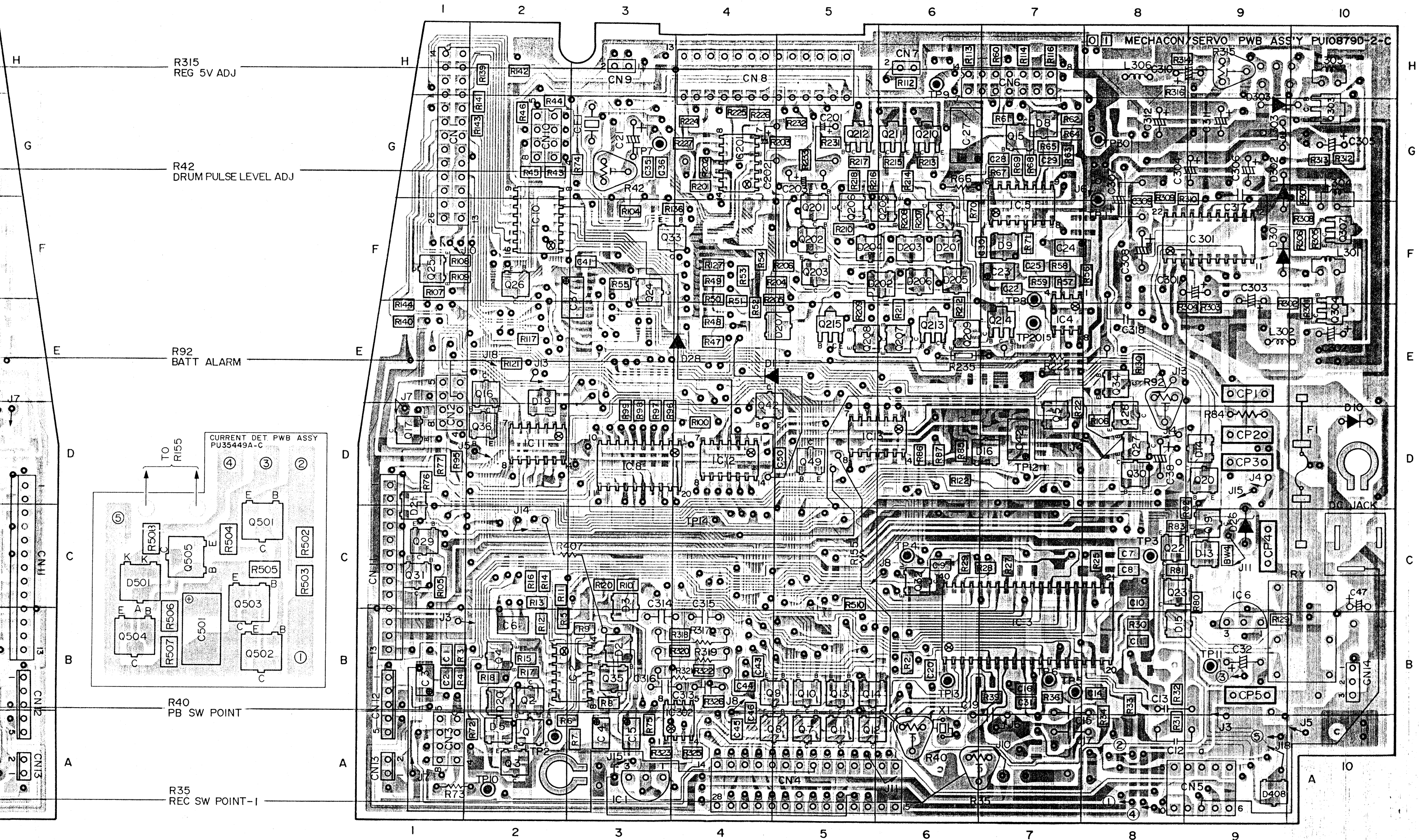
Hinweis:
Bauteile in den schattierten Flächen
sind Sicherheitsbauteile!
Nur gegen Original-Ersatzteile
auswechseln!

W1 TP4 FF25 25Hz 3.8 Vp-p	W2 IC3 39 PIN CRYSTAL 1 32.768 kHz 3.3 Vp-p
W5 TP3 CAPSTAN SAMPLE POSITION 25 Hz 4.9 Vp-p	W6 IC3 27 PIN CAPSTAN FG 500 Hz 4.3 Vp-p
W9 TP13 SW-A PULSE 12.5 Hz 4.4 Vp-p	W10 TP7 DRUM PULSE 37.5 Hz 0.9 Vp-p
W13 IC3 10 PIN DRUM TRAPE 12.5 Hz 5.0 Vp-p	W14 TP5 DRUM SAMPLE POSITION 12.5 Hz 5.0 Vp-p
W17 IC3 17 PIN TRACKING MMV 25 Hz 3.9 Vp-p	W18 IC3 18 PIN TRAP DUTY MMV 25 Hz 2.5 Vp-p
W21 TP6 DRUM PHASE ERROR DC 2.5 V	W22 IC301 21 PIN SW REG OSC 40 kHz 2.0 Vp-p
W25 TP102 CTL PULSE 25 Hz 1.2 Vp-p	W26 TP103 DRUM PHASE ERROR DC 2.5 V

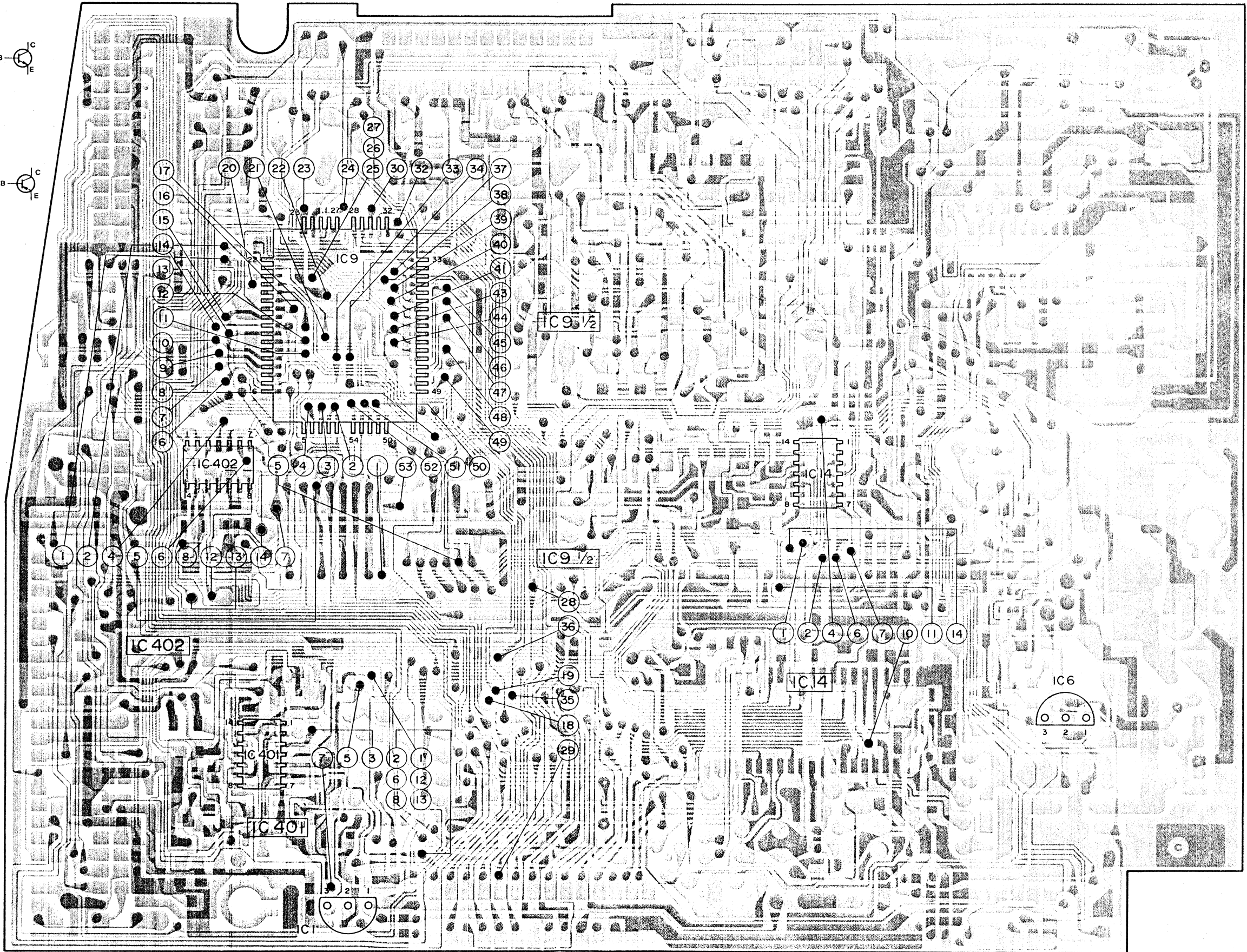
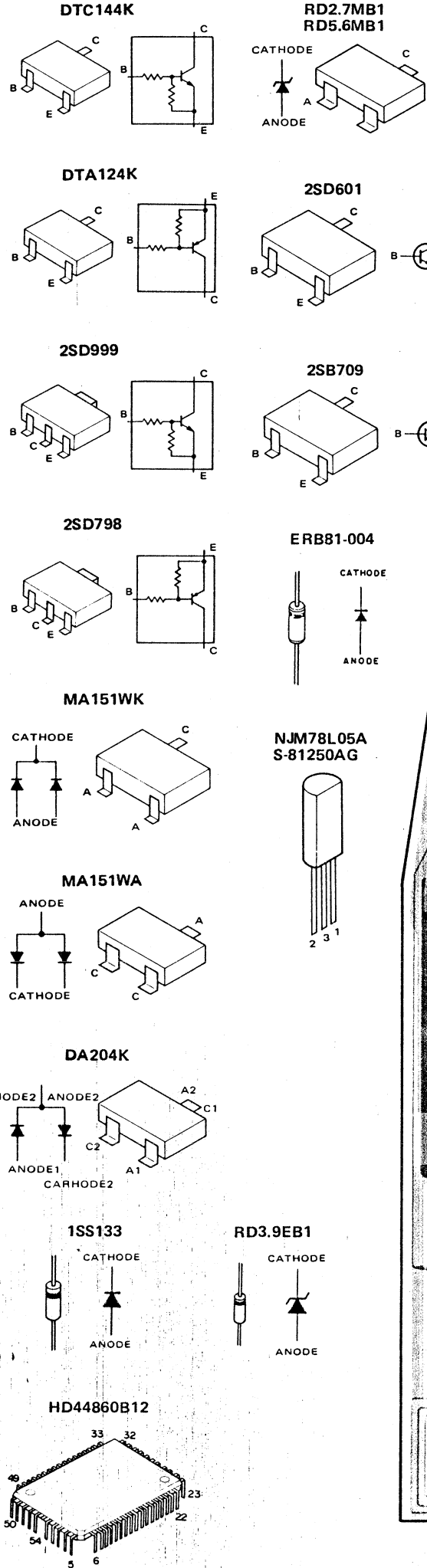
**01 Platte Servo-Regelung / Mechaniksteuerung
Mechacon / Servo PWB**



— Rear —



0 1 Platte Servo-Regelung / Mechaniksteuerung (IC-Anschlüsse)
Mechacon / Servo PWB (IC-Pin location)



MODE	STOP	PLAY
IC No.		
IC2 ①	3.7	0.8
②	1.0	2.5
③	3.2	2.7
④	5.0	5.0
⑤	0	1.3
⑥	0	1.3
⑦	0	1.3
⑧	0	0
⑨	3.1	2.4
⑩	1.9	1.9
⑪	0	0
⑫	3.0	3.0
⑬	3.1	2.4
⑭	2.4	3.8
IC4 ①	1.4	—
②	1.4	—
③	1.4	—
④	0	—
⑤	2.0	—
⑥	4.2	—
⑦	0	—
⑧	5.0	—
IC201 ①	0	—
②	5.0	—
③	5.0	—
④	0.4	—
⑤	4.9	—
⑥	3.6	—
⑦	3.5	—
⑧	2.2	—
⑨	2.2	—
⑩	0.8	—
⑪	0.8	—
⑫	0	—
⑬	0	—
⑭	4.2	—
IC301 ①	0	—
②	10.1	—
③	0.7	—
④	0.8	—
⑤	10.2	—
⑥	0	—
⑦	0	—
⑧	0	—
⑨	0	—
⑩	0	—
⑪	10.2	—
⑫	0	—
⑬	0	—
⑭	0	—
⑮	0	—
⑯	0	—
⑰	5.3	—
⑱	3.4	—
⑲	3.5	—
⑳	2.9	—
㉑	3.0	—
㉒	6.9	—

Spannungstabellen · DC voltage tables

Servoregelung/Mechaniksteuerung Platte 0 1
Servo/Mechacon PWB 0 1

MODE	STOP	PLAY	REC	FWD. SEARCH	REV. SEARCH	PLAY PAUSE	REC PAUSE
IC No.							
IC2-1	3.7	0.8	0.9	2.2	2.6	3.8	3.8
2	1.0	2.5	2.4	2.7	2.8	1.0	1.0
3	3.2	2.7	2.5	2.7	2.8	2.4	2.7
4	5.0	5.0	5.0	5.0	5.0	5.0	5.0
5	0	1.3	1.3	2.4	2.4	0	1.3
6	0	1.3	1.3	2.4	2.4	0	1.3
7	0	1.3	1.3	2.4	2.4	0	1.3
8	0	0	0	0	0	0	0
9	3.1	2.4	2.4	2.7	2.8	2.3	2.3
10	1.9	1.9	1.9	1.9	1.9	2.3	2.3
11	0	0	0	0	0	0	0
12	3.0	3.0	3.0	3.0	3.0	2.3	2.3
13	3.1	2.4	2.4	2.7	2.8	2.3	2.3
14	2.4	3.8	3.8	3.8	3.8	1.7	1.7
IC4-1	1.4	—	—	—	—	—	—
2	1.4	—	—	—	—	—	—
3	1.4	—	—	—	—	—	—
4	0	—	—	—	—	—	—
5	2.0	—	—	—	—	—	—
6	4.2	—	—	—	—	—	—
7	0	—	—	—	—	—	—
8	5.0	—	—	—	—	—	—
IC201-1	0	—	—	—	—	—	—
2	5.0	—	—	—	—	—	—
3	5.0	—	—	—	—	—	—
4	0.4	—	—	—	—	—	—
5	4.9	—	—	—	—	—	—
6	3.6	—	—	—	—	—	—
7	3.5	—	—	—	—	—	—
8	2.2	—	—	—	—	—	—
9	2.2	—	—	—	—	—	—
10	0.8	—	—	—	—	—	—
11	0.8	—	—	—	—	—	—
12	0	—	—	—	—	—	—
13	0	—	—	—	—	—	—
14	4.2	—	—	—	—	—	—
IC301-1	0	—	—	—	—	—	—
2	10.1	—	—	—	—	—	—
3	0.7	—	—	—	—	—	—
4	0.8	—	—	—	—	—	—
5	10.2	—	—	—	—	—	—
6	0	—	—	—	—	—	—
7	0	—	—	—	—	—	—
8	0	—	—	—	—	—	—
9	0	—	—	—	—	—	—
10	0	—	—	—	—	—	—
11	10.2	—	—	—	—	—	—
12	0	—	—	—	—	—	—
13	0	—	—	—	—	—	—
14	0	—	—	—	—	—	—
15	0	—	—	—	—	—	—
16	0	—	—	—	—	—	—
17	5.3	—	—	—	—	—	—
18	3.4	—	—	—	—	—	—
19	3.5	—	—	—	—	—	—
20	2.9	—	—	—	—	—	—
21	3.0	—	—	—	—	—	—
22	6.9	—	—	—	—	—	—

MODE	STOP	PLAY	REC	FWD. SEARCH	REV. SEARCH	PLAY PAUSE	REC PAUSE
IC No.							
IC3-1	4.3	—	—	—	—	—	—
2	4.3	—	—	—	—	—	—
3	4.3	—	—	—	—	—	—
4	0	—	—	—	—	—	—
5	0	0	0	0	0	0	0
6	1.6	—	—	—	—	—	—
7	0.1	—	—	—	—	—	—
8	4.9	—	—	—	—	—	—
9	1.7	—	—	—	—	—	—
10	4.9	—	—	—	—	—	—
11	4.1	—	—	—	—	—	—
12	4.1	—	—	—	—	—	—
13	0.1	—	—	—	—	—	—
14	5.0	5.0	5.0	5.0	5.0	5.0	5.0
15	0.8	—	—	—	—	—	—
16	2.8	2.7	2.4	2.7	2.7	2.7	2.7
17	2.3	—	—	—	—	—	—
18	0.6	—	—	—	—	—	—
19	2.6	—	—	—	—	—	—
20	0.2	—	—	—	—	—	—
21	4.3	—	—	—	—	—	—
22	4.7	—	—	—	—	—	—
23	0	—	—	—	—	—	—
24	4.4	—	—	—	—	—	—
25	4.2	—	—	—	—	—	—
26	4.4	—	—	—	—	—	—
27	4.2	—	—	—	—	—	—
28	0	0	0	0	0	0	0
29	4.5	4.5	0	4.5	4.5	4.5	4.5
30	4.6	4.6	0	4.6	4.6	4.6	0
31	0.1	0.1	0.1	0.1	5.0	5.1	0.1
32	0	0	0	0	5.1	0	0
33	4.2	4.2	4.2	4.2	4.2	4.2	4.2
34	0	0	0	5.1	5.1	5.1	0
35	0	—	—	—	—	—	—
36	4.2	—	—	—	—	—	—
37	4.2	—	—	—	—	—	—
38	1.3	—	—	—	—	—	—
39	0	—	—	—	—	—	—
40	0	0	0	0	0	0	0
IC302-1	3.7	2.5	2.5	2.7	2.3	2.4	2.4
2	3.7	2.5	2.5	2.6	2.4	2.4	2.4
3	3.6	2.5	2.5	2.6	2.3	2.4	2.4
4	0	0	0	0	0	0	0
5	3.5	2.4	2.4	2.5	2.2	2.3	2.3
6	3.5	2.4	2.4	0	2.2	2.3	2.3
7	3.5	2.3	2.3	2.4	2.2	2.3	2.3
8	5.0	5.0	5.0	5.0	5.0	5.0	5.0

Spannungstabellen · DC voltage tables

Servoregelung/Mechaniksteuerung Platte 0 1
Servo/Mechacon PWB 0 1

MODE TR No.	STOP			PLAY			REC			FWD. SEARCH			REV. SEARCH			PLAY PAUSE			REC PAUSE		
	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E
Q 1	5.0	0	0	0	2.8	0	0	2.8	0	0	2.8	0	0	2.8	0	0	2.8	0	0	2.8	0
Q 2	0	0	0	0.4	0	0.4	2.8	0	0	2.8	0	0	2.8	0	0	2.8	0	0	2.8	0	0
Q 3	5.1	0	0	0	0.9	0	0	0.8	0	0	2.2	0	0	2.5	0	0	3.6	0	0	3.6	0
Q 4	0.3	0	0.9	0.6	0	1.2	0.6	0	1.2	1.9	0	2.4	2.2	0	2.8	3.3	0	3.8	3.6	0	3.8
Q 7	7.9	0	7.9	—	—	7.9	—	—	7.9	—	—	7.9	—	—	7.9	—	—	7.9	—	—	7.9
Q 8	0	7.9	7.9	—	—	7.9	—	—	7.9	—	—	7.9	—	—	7.9	—	—	7.9	—	—	7.9
Q 9	0	7.9	7.9	—	—	7.9	—	—	7.9	—	—	7.9	—	—	7.9	—	—	7.9	—	—	7.9
Q 10	7.9	0	7.9	—	—	7.9	—	—	7.9	—	—	7.9	—	—	7.9	—	—	7.9	—	—	7.9
Q 11	0	7.9	0	—	—	0	—	—	0	—	—	0	—	—	0	—	—	0	—	—	0
Q 12	4.3	0.1	0	—	—	0	—	—	0	—	—	0	—	—	0	—	—	0	—	—	0
Q 13	4.3	0.1	0	—	—	0	—	—	0	—	—	0	—	—	0	—	—	0	—	—	0
Q 14	0	7.9	0	—	—	0	—	—	0	—	—	0	—	—	0	—	—	0	—	—	0
Q 17	0	2.5	0	0	2.5	0	0	2.6	0	0	2.5	0	0	2.5	0	0	2.5	0	0	2.6	0
Q 32	4.2	0.1	0	2.1	2.5	0	2.1	2.5	0	2.1	2.5	0	2.1	2.5	0	4.1	0	0	4.2	—	0
Q 35	4.8	2.0	3.1	4.8	1.9	3.0	4.8	1.9	3.0	4.8	1.9	3.0	4.8	1.9	3.0	1.7	2.3	2.3	1.8	2.3	2.3
Q 43	0.1	2.8	0	0.1	2.8	0	0.1	2.8	0	4.8	0	0	4.8	0	0	0.1	2.8	0	0.1	2.8	0
Q201	0.1	1.2	0	2.0	0.7	0	2.0	0.7	0	2.0	0.7	0	2.0	0.7	0	2.0	0.7	0	2.0	0.8	0
Q202	4.3	0.1	0	2.2	0.7	0	2.2	0.7	0	2.2	0.7	0	2.2	0.7	0	2.2	0.7	0	2.2	0.7	0
Q203	0.1	1.2	0	2.1	0.7	0	2.1	0.7	0	2.1	0.7	0	2.1	0.7	0	2.1	0.7	0	2.1	0.7	0
Q204	1.3	0.7	0.7	0.7	4.0	0.5	0.8	4.0	0.5	0.7	4.1	0.5	0.7	4.1	0.5	0.7	4.0	0.5	0.8	4.6	0.6
Q205	0.6	0.1	0.2	0.8	4.1	0.5	0.8	4.0	0.5	0.7	4.1	0.5	0.7	4.1	0.5	0.7	4.1	0.5	0.8	4.6	0.6
Q206	0.6	0.2	0.7	0.7	4.1	0.5	0.7	4.1	0.5	0.7	4.1	0.5	0.7	4.1	0.5	0.7	4.1	0.5	0.7	4.7	0.6
Q207	0.6	0.2	0.1	0.7	4.1	0.5	0.7	4.1	0.5	0.7	4.1	0.5	0.7	4.1	0.5	0.7	4.1	0.5	0.7	4.7	0.6
Q208	0.6	0.2	0.2	0.7	4.1	0.5	0.7	4.1	0.5	0.7	4.1	0.5	0.7	4.1	0.5	0.7	4.1	0.5	0.7	4.7	0.5
Q209	0.6	0.7	0.2	0.7	4.1	0.5	0.7	4.0	0.5	0.7	4.0	0.5	0.7	4.1	0.5	0.7	4.0	0.5	0.7	4.6	0.6
Q210	0.7	0	0	5.5	3.0	5.7	5.4	2.9	5.7	5.5	3.0	5.8	5.4	2.9	5.7	5.4	2.9	5.7	6.3	3.4	6.0
Q211	0.2	0	0	5.4	2.9	5.7	5.4	2.9	5.7	5.5	3.0	5.8	5.4	2.9	5.7	5.4	2.9	5.7	6.4	3.4	6.7
Q212	0.2	0	0	0.5	2.9	0	5.4	2.9	5.7	5.5	2.9	5.8	5.4	2.9	5.7	5.4	2.9	5.7	6.3	3.4	6.6
Q213	0.2	0	0	0.5	2.9	0	0.5	2.9	0	0.5	3.0	0	0.5	2.9	0	0.5	2.9	0	0.6	3.4	0
Q214	0.2	0	0	0.5	2.9	0	0.5	2.9	0	0.5	3.0	0	0.5	2.9	0	0.5	2.9	0	0.6	3.4	0
Q215	0.7	0	0	0.5	2.9	0	0.5	2.9	0	0.5	3.0	0	0.5	2.9	0	0.5	2.9	0	0.6	3.4	0
Q303	9.6	5.1	10.1	9.5	5.1	10.1	9.6	5.1	10.1	9.5	5.1	10.1	9.5	5.1	10.1	9.5	5.1	10.1	9.6	5.1	10.1
Q304	10.2	1.9	10.2	9.8	2.9	10.1	9.8	2.9	10.1	9.5	6.3	10.1	9.5	6.3	10.1	10.0	9.9	10.1	9.9	10.0	10.1
Q307	10.2	0.1	10.2	9.7	5.7	10.1	9.7	5.7	10.1	9.6	5.8	10.1	9.6	5.8	10.1	9.7	5.8	10.1	9.6	6.6	10.1

Audio/Servo-Platte 0 4
Audio/Servo PWB 0 4

MODE IC No.	STOP	PLAY	REC	FWD. SEARCH	REV. SEARCH	PLAY PAUSE	REC PAUSE
IC101							
①	0.2	0.1	0.1	0.1	0.1	0.2	0.2
②	9.7	9.7	9.7	9.6	9.6	9.7	9.7
③	0	0	0	0	0.1	0.1	0.1
④	0.1	0.1	0	0.1	0	0	0
⑤	0.1	0	0	0	0.1	0.1	0.1
⑥	0	0	0	0.1	0.1	0	0
⑦	0	0.1	0	0	0.1	0	0.1
⑧	0	0	0	0.1	0	0	0
⑨	0.1	0	0	0	0	0	0.1
⑩	5.0	5.0	5.0	5.0	5.0	5.0	5.0
⑪	5.0	5.0	5.0	5.0	5.0	0	4.9
⑫	0	0	0	0.1	0	0.1	0.2
⑬	0	0	0.1	0.1	0.1	0	0.1
⑭	0	0	0.1	0	0	0	0
⑮	0.1	0.1	0.1	0.1	0.1	0.1	0
⑯	9.7	9.6	9.7	9.6	9.6	9.7	9.6
IC102							
①	1.9	2.9	2.8	6.2	7.0	9.9	0
②	1.9	2.0	2.0	5.3	6.8	9.5	9.6
③	0	2.9	2.8	6.1	0.2	3.1	0
④	0.1	0.1	0	0.1	5.1	0.1	0.1
⑤	0	0	0	0.1	3.0	0	0
⑥	0	0	0	0	2.5	0	0
⑦	0.1	0.1	0.1	0	0.1	0.1	0.1
⑧	0.1	0	0.1	0	0	0	0
⑨	0	0.1	0.1	0	0.1	0	0
⑩	5.0	4.9	5.0	5.0	5.0	5.0	5.0
⑪	5.0	5.0	5.0	5.0	5.0	5.0	5.0
⑫	0	2.4	2.5	2.4	0.1	0	0
⑬	0.1	3.1	3.1	3.0	0.1	0	0
⑭	0.1	5.1	5.2	5.1	0.1	0	0.1
⑮	0	0.1	0.1	0.1	7.0	0.1	0
⑯	1.9	2.8	2.9	6.1	6.0	9.5	9.6
IC103							
①	0.1	0	0	0.1	0	0	0
②	1.4	1.4	1.4	1.4	1.4	1.4	1.4
③	1.4	1.3	1.4	1.4	1.4	1.4	1.4
④	1.4	1.4	1.3	1.4	1.4	1.3	1.3
⑤	1.4	1.3	1.4	1.3	1.3	1.4	1.4
⑥	4.5	2.6	2.6	2.5	2.5	4.5	4.5
⑦	0.7	0.6	0.7	0.7	3.7	0.7	0.7
⑧	0	0	0.1	0	0.1	0.1	0
⑨	0.2	0.1	0.1	0.1	0	0.2	0.2
⑩	0	1.1	0.9	1.0	0.1	0.1	0
⑪	4.3	2.2	2.2	1.4	1.4	4.2	4.3
⑫	5.0	1.8	1.6	1.6	1.6	5.0	4.9
⑬	3.4	2.9	2.7	2.7	2.7	3.4	3.3
⑭	3.5	2.6	2.6	2.6	2.6	3.3	3.4
⑮	0.7	2.4	2.7	2.8	2.8	0.7	0.7
⑯	5.0	5.0	5.0	5.0	5.0	5.0	5.0
IC104							
①	1.4	1.3	2.5	1.4	1.4	1.4	1.4
②	1.4	1.4	1.5	1.4	1.5	1.4	1.5
③	1.4	1.4	1.6	1.3	1.4	1.4	1.4
④	0	0	0.1	0.1	0.1	0.1	0
⑤	2.0	1.9	2.0	2.0	2.0	2.0	2.0
⑥	0.6	0.6	2.7	2.8	2.8	0.6	0.5
⑦	0	0	0	0	0	0	0
⑧	5.0	5.0	5.0	5.0	5.0	5.0	5.0

MODE IC No.	STOP	PLAY	REC	FWD. SEARCH	REV. SEARCH	PLAY PAUSE	REC PAUSE
IC105							
①	3.9	2.3	2.4	2.4	2.3	2.3	2.6
②	0.7	2.5	2.5	2.6	2.5	2.5	2.5
③	1.7	2.5	2.5	2.6	2.4	2.5	2.6
④	5.0	5.0	5.0	5.0	5.0	5.0	5.0
⑤	0.4	0.4	0.4	0.4	0.4	0.4	0.3
⑥	0.4	0.3	0.3	0.3	0.3	0.3	0.3
⑦	0	0	0.1	0	0	0	0
⑧	0	0	0	0	0	0	0
⑨	3.3	2.5	2.6	2.6	2.5	2.5	2.6
⑩	1.7	1.7	1.7	1.6	1.7	1.7	1.7
⑪	0	0	0	0.1	0.1	0	0
⑫	3.4	3.3	3.3	3.3	3.4	3.3	3.3
⑬	3.4	2.6	2.7	2.6	2.4	2.5	2.6
⑭	3.2	3.9	3.9	3.9	3.8	3.9	3.9
IC106							
①	0.1	0.1	0.1	0.1	0	0	0.1
②	1.4	1.4	1.4	1.4	1.4	1.3	1.4
③	1.5	1.4	1.5	1.4	1.4	1.5	1.4
④	1.4	1.4	1.4	1.4	1.4	1.4	1.4
⑤	1.4	1.4	1.4	1.4	1.4	1.4	1.4
⑥	4.3	2.3	2.3	2.2	2.3	2.2	2.2
⑦	0.7	0.6	0.7	0.7	3.7	0.6	0.7
⑧	0.1	0	0.1	0	0	0	0
⑨	0.1	0.1	0.1	0.1	0.1	0.2	0.2
⑩	0.1	0.2	0.2	0.2	0.0	0.2	0.2
⑪	4.2	2.2	2.2	2.2	2.2	2.2	2.2
⑫	5.0	1.6	1.6	1.5	1.6	1.6	1.5
⑬	3.4	2.7	2.8	2.7	2.8	2.7	2.8
⑭	3.6	2.6	2.6	2.6	2.6	2.6	2.6
⑮	0.7	2.5	2.6	2.6	2.4	2.5	2.5
⑯	5.0	5.0	5.0	5.0	5.0	5.0	5.0

Spannungstabellen · DC voltage tables

Servoregelung/Mechaniksteuerung Platte 0 1

Servo/Mechacon PWB 0 1

MODE IC No.	STOP	PLAY	REC	FWD. SEARCH	REV. SEARCH	PLAY PAUSE	REC PAUSE
IC1-①	10.1	10.2	10.2	10.1	10.1	10.2	0.2
②	0	0	0	0	0	0.1	0.1
③	4.9	5.0	5.0	5.0	5.0	5.0	5.0
IC5-①	0	0	0	0	0	0	0
②	0	0	0	0	0	0	0.1
③	0	0	0	0	0	0	0.1
④	0.1	0	0	0	0	0	0
⑤	5.0	0	0	0	0	0	0
⑥	0	0	0.1	0	0	0.1	0
⑦	0.1	0	0	0	0	0	0
⑧	5.0	4.9	5.0	5.0	5.0	5.0	5.0
⑨	5.1	4.9	5.0	5.0	5.0	5.0	5.0
⑩	0	0	0.1	0	0	0.1	0
⑪	0.2	0.2	0.3	0.3	0.2	0.2	0.2
⑫	5.0	4.9	4.9	4.9	4.9	4.9	4.9
⑬	0	0	0	0	0	0.1	0.1
⑭	0	1.3	1.4	1.3	1.3	1.3	1.3
⑮	0	2.3	2.4	2.4	2.5	2.4	2.5
⑯	5.0	5.0	5.0	5.0	5.0	5.0	5.1
IC6-①	0	0	0	0	0	0	0.1
②	10.1	10.1	10.0	9.9	9.9	10.0	9.9
③	5.2	0	5.2	0	0	5.1	5.1
IC8-①	5.1	5.1	5.1	5.0	5.1	5.0	5.1
②	5.0	5.0	5.0	5.0	5.0	4.9	4.7
③	5.1	5.2	5.1	5.0	5.0	5.1	5.1
④	0	4.9	5.0	5.0	0	5.0	5.0
⑤	5.1	5.1	5.1	5.0	5.0	5.1	5.1
⑥	5.1	5.0	0	0	0	0.1	0
⑦	5.1	1.1	5.0	5.0	5.0	5.0	5.1
⑧	4.9	0.1	0	0.1	0	0	0
⑨	5.0	5.0	5.0	5.0	5.0	5.0	5.0
⑩	0	0	0	0	0.1	0.1	0
⑪	0	0	0	0	0	0	0
⑫	5.1	5.0	4.9	5.0	5.0	5.0	4.9
⑬	0	0	0	0	0	0	0
⑭	5.1	5.0	5.0	5.0	5.0	5.0	5.1
⑮	5.0	0	0.1	0	0	0	0
⑯	5.0	5.1	5.1	5.0	5.0	5.0	5.1
⑰	5.1	5.0	0	0	0.1	0	5.0
⑱	5.1	5.1	5.0	5.1	5.0	5.1	5.1
⑳	5.1	5.1	5.1	5.1	5.1	5.1	5.1
IC9-①	5.1	5.1	5.1	5.0	5.1	5.1	5.1
②	5.1	5.1	0.1	5.1	5.1	5.1	5.1
③	5.1	0.1	0	5.1	5.1	5.1	5.1
④	0.1	5.1	0	5.1	5.1	5.1	0.1
⑤	5.1	5.1	0	5.1	5.0	5.0	0.1
⑥	5.1	5.1	5.2	5.1	5.1	5.1	5.1
⑦	4.9	2.4	0.1	0.6	4.9	0	0
⑧	5.2	0.1	1.3	5.1	1.6	0.1	0
⑨	3.3	0.1	0.1	0.1	0	0	0.1
⑩	3.3	3.3	3.3	3.3	0.1	3.3	3.3
⑪	5.1	5.1	5.1	5.1	5.1	5.1	0
⑫	5.1	5.2	5.1	5.1	5.0	5.1	0
⑬	5.0	5.0	4.9	4.9	4.9	4.9	0
⑭	5.1	5.0	5.0	5.1	5.0	5.0	0

MODE IC No.	STOP	PLAY	REC	FWD. SEARCH	REV. SEARCH	PLAY PAUSE	REC PAUSE
IC9-⑮	5.1	5.1	5.1	5.0	5.0	5.1	0
⑯	5.1	5.1	5.1	5.0	5.1	5.1	0
⑰	5.1	0	0	0	0	0.1	0
⑱	0	5.1	5.1	5.1	0	0.1	0
⑲	0	0	0.1	0.1	5.0	0.1	0
⑳	5.1	0	0	0.1	0	0.1	0
㉑	0	0	0.1	0	0	0	0
㉒	0	0	0	0.1	0	0.1	0
㉓	2.7	2.7	2.7	2.7	2.7	2.7	0
㉔	2.8	2.9	2.8	2.8	2.8	2.8	0
㉕	5.2	5.1	5.2	5.1	5.0	5.1	0
㉖	5.2	5.2	5.2	5.1	5.1	5.1	0
㉗	5.1	5.1	5.1	5.2	5.1	5.1	0
㉘	0.1	0.1	0.1	0	0.1	0	0
㉙	0.1	0	0.1	0	0	0.1	0
㉚	5.0	4.9	0.1	4.9	5.0	5.0	0.1
㉛	5.1	5.1	0.1	5.1	5.0	5.1	0.1
㉜	0.1	0.1	0.1	5.0	5.1	5.0	0
㉝	5.1	5.1	0.1	5.1	5.1	5.1	0
㉞	5.1	0.1	5.1	0.1	0.1	0	0
㉟	0.1	0.2	0.1	5.1	5.1	0.1	0
㊱	0	2.6	2.6	2.5	2.5	0.1	0
㊲	0	2.6	2.5	2.6	2.5	2.5	0
㊳	5.1	5.0	5.1	0	5.1	5.1	0
㊴	5.1	5.1	5.1	5.0	0	0	0
㊵	0.1	5.0	5.1	5.1	5.0	0	0
㊶	5.0	5.1	0	5.0	5.1	0	0
㊷	5.1	5.0	5.1	5.1	5.1	0	0.2
㊸	5.1	5.0	5.1	5.0	5.1	0	0
㊹	5.1	0	0	0.1	0.1	0	0
㊺	0.6	0.6	0.6	0.6	0.6	0.6	0.6
㊻	0	0	0.1	0	0	0	0
㊼	0.1	0	0	0	0	0	0
㊽	0.1	5.0	5.0	0.1	0.1	0	0
㊾	0.1	0	0.1	5.0	5.0	0	0
㊿	5.1	5.1	5.1	5.1	5.0	0	0
①	5.1	5.1	5.1	5.1	5.0	0	0
②	5.1	5.1	5.1	5.1	5.1	0	0
③	5.1	5.1	5.1	5.1	5.1	0	0
④	5.1	5.1	5.1	5.1	5.1	0	0
⑤	5.1	5.1	5.1	5.1	5.1	0	0
⑥	5.1	5.1	5.1	5.1	5.1	0	0
⑦	5.1	5.1	5.1	5.1	5.1	0	0
⑧	5.1	5.1	5.1	5.1	5.1	0	0
⑨	5.1	5.1	5.1	5.1	5.1	0	0
⑩	5.1	5.1	5.1	5.1	5.1	0	0
⑪	5.1	5.1	5.1	5.1	5.1	0	0
⑫	5.1	5.1	5.1	5.1	5.1	0	0
⑬	5.1	5.1	5.1	5.1	5.1	0	0
⑭	5.1	5.1	5.1	5.1	5.1	0	0
⑮	5.1	5.1	5.1	5.1	5.1	0	0
⑯	5.1	5.1	5.1	5.1	5.1	0	0
⑰	5.1	5.1	5.1	5.1	5.1	0	0
⑱	5.1	5.1	5.1	5.1	5.1	0	0
⑲	5.1	5.1	5.1	5.1	5.1	0	0
⑳	5.1	5.1	5.1	5.1	5.1	0	0
㉑	5.1	5.1	5.1	5.1	5.1	0	0
㉒	5.1	5.1	5.1	5.1	5.1	0	0
㉓	5.1	5.1	5.1	5.1	5.1	0	0
㉔	5.1	5.1	5.1	5.1	5.1	0	0
㉕	5.1	5.1	5.1	5.1	5.1	0	0
㉖	5.1	5.1	5.1	5.1	5.1	0	0
㉗	5.1	5.1	5.1	5.1	5.1	0	0
㉘	5.1	5.1	5.1	5.1	5.1	0	0
㉙	5.1	5.1	5.1	5.1	5.1	0	0
㉚	5.1	5.1	5.1	5.1	5.1	0	0
㉛	5.1	5.1	5.1	5.1	5.1	0	0
㉜	5.1	5.1	5.1	5.1	5.1	0	0
㉝	5.1	5.1	5.1	5.1	5.1	0	0
㉞	5.1	5.1	5.1	5.1	5.1	0	0
㉟	5.1	5.1	5.1	5.1	5.1	0	0
㊱	5.1	5.1	5.1	5.1	5.1	0	0
㊲	5.1	5.1	5.1	5.1	5.1	0	0
㊳	5.1	5.1	5.1	5.1	5.1	0	0
㊴	5.1	5.1	5.1	5.1	5.1	0	0
㊵	5.1	5.1	5.1	5.1	5.1	0	0
㊶	5.1	5.1	5.1	5.1	5.1	0	0
㊷	5.1	5.1	5.1	5.1	5.1	0	0
㊸	5.1	5.1	5.1	5.1	5.1	0	0
㊹	5.1	5.1	5.1	5.1	5.1	0	0
㊺	5.1	5.1	5.1	5.1	5.1	0	0
㊻	5.1	5.1	5.1	5.1	5.1	0	0
㊼	5.1	5.1	5.1	5.1	5.1	0	0
㊽	5.1	5.1	5.1	5.1	5.1	0	0
㊾	5.1	5.1	5.1	5.1	5.1	0	0
㊿	5.1	5.1	5.1	5.1	5.1	0	0
①	5.0	0	0	0	0	0.1	0
②	5.0	5.1	5.0	5.1	5.1	0	0
③	5.1	5.0	0	5.0	5.1	5.0	0
④	0.1	5.0	5.0	5.0	5.0	5.1	5.1
⑤	5.1	5.1	5.0	5.1	0	5.0	5.1
⑥	5.1	5.1	5.0	0	5.0	5.1	5.1
⑦	5.0	5.0	0	4.9	5.0	5.0	5.0
⑧	0	0	0.1	0	0.1	0	0.1
⑨	5.0	5.0	5.0	5.0	5.0	5.0	5.0
⑩	7.5	5.0	0	5.2	5.1	5.0	7.6
⑪	0.6	3.9	1.3	0.1	0.7	3.8	0.6
⑫	0.6	3.8	0.7	0.7	0	3.8	0.6
⑬	0.1	3.9	0.7	0.6	0.7	3.9	0.6
⑭	0.6	3.8	0	0.6	0.7	3.9	0
⑮	3.9	3.9	3.8	3.8	3.9	0.1	0
⑯	3.8	0.1	0.1	0	0	0.0	0.1

Servoregelung/Mechaniksteuerung Platte **0 1**
 Servo/Mechacon PWB **0 1**

MODE IC No.	STOP	PLAY	REC	FWD. SEARCH	REV. SEARCH	PLAY PAUSE	REC PAUSE
IC11-							
①	5.1	5.1	5.1	5.1	5.1	5.1	5.1
②	0	0	0	0	0	0.1	0.1
③	5.2	5.1	5.0	5.1	5.1	5.1	5.1
④	5.1	5.1	5.1	5.0	5.1	5.1	5.1
⑤	0	0	0	0	0.1	0	0
⑥	5.1	5.1	5.0	5.1	5.1	5.1	5.1
⑦	0.1	0	0.1	0	0	0.1	0.1
⑧	5.1	5.1	5.1	5.0	5.0	5.1	5.1
⑨	5.1	5.1	5.2	5.1	5.1	5.1	5.2
⑩	5.1	5.1	5.1	5.1	5.1	5.1	5.1
⑪	0	0	0	0.1	0	0	0
⑫	0.1	0.1	0.1	0	0	0	0.1
⑬	0	0.1	0	0	0.1	0	0
⑭	5.1	5.1	5.2	5.1	5.1	5.1	5.1
IC12-							
①	5.1	0	0	5.1	5.1	5.1	5.2
②	5.0	5.0	0.1	5.0	5.0	5.0	5.0
③	0	5.1	5.1	0.1	0	0.1	0.1
④	0.1	0	0.1	0	0.1	0	0.1
⑤	5.1	5.1	5.1	5.1	5.1	5.1	5.1
⑥	5.2	5.2	5.1	5.1	5.0	5.1	5.1
⑦	0	0	0	0	0	0.1	0.1
⑧	2.6	0.9	0.1	0.6	0.7	3.8	0.1
⑨	0	0	0	0	0	0	0.1
⑩	5.1	5.1	5.2	5.2	5.2	5.2	5.1
⑪	0	5.1	5.1	5.1	5.1	5.1	5.1
⑫	5.1	5.1	0.1	5.1	5.1	5.1	0.1
⑬	5.1	0	5.1	0.1	0.1	0	5.1
⑭	5.1	5.2	5.1	5.1	5.1	5.1	5.1
IC13-							
①	5.1	5.1	0	5.1	5.1	5.1	5.1
②	0	0	5.1	0	0.1	0	0
③	0.9	4.1	0.9	3.6	3.5	2.2	0.8
④	0.4	0.1	1.7	0.1	1.4	4.8	5.1
⑤	1.3	1.2	1.2	3.3	1.3	4.5	4.6
⑥	0.3	0	0.1	1.6	4.9	0.1	0
⑦	0.1	0	0	0	0	0	0
⑧	0	0.1	0.1	0	0.1	0	0
⑨	5.1	5.1	5.1	5.1	5.1	5.1	5.2
⑩	5.1	5.2	5.1	5.1	5.1	5.1	5.1
⑪	0.1	0	0	0.1	0	0	0
⑫	0.1	0	0	0	0	0	0.1
⑬	4.9	4.9	4.9	4.9	4.9	4.9	4.9
⑭	5.2	5.2	5.1	5.1	5.1	5.1	5.2
IC14-							
①	0	0	0	0	0	0	0
②	3.0	3.0	3.0	3.0	3.0	0.1	3.0
③	2.5	2.5	2.5	2.5	2.5	0	2.5
④	5.0	5.0	5.0	5.0	5.0	0	5.0
⑤	2.5	2.5	2.6	2.5	2.5	0	2.5
⑥	2.9	2.9	2.9	2.9	2.8	0	2.9
⑦	0	0	0	0	0	0	0
⑧	0.7	0.7	0.7	0.8	0.7	0	0
⑨	1.4	1.4	1.4	1.5	1.4	0	0
⑩	0.6	0.6	0.6	0.6	0.6	0	0.6
⑪	0	0	0	0	0	0	0
⑫	0.1	0.1	0.1	0.1	0.1	0	0.1
⑬	2.5	2.5	2.5	2.5	2.4	0.1	2.5
⑭	0	0	0.1	0	0	0	0

MODE IC No.	STOP	PLAY	REC	FWD. SEARCH	REV. SEARCH	PLAY PAUSE	REC PAUSE
IC401-							
①	4.9	0	0	0	0.1	0	0
②	0.1	0.1	0	0	0	0	0
③	5.0	5.0	5.0	4.9	4.9	0	0
④	5.0	5.0	5.0	5.0	4.9	0	0.1
⑤	0.1	0	0.1	0	0.1	0	0
⑥	0.1	5.0	5.1	5.0	4.9	0	0
⑦	0	0	0.1	0.1	0	0	0
⑧	5.0	0.1	0	0	0	0	0
⑨	5.0	0	0.1	0	0.1	0	0
⑩	0.1	5.0	5.0	0	4.9	0	0
⑪	5.0	5.0	5.0	5.0	5.0	0	0
⑫	0	0	0	0.1	0	0	0
⑬	0	0	0	5.0	0	0	0
⑭	5.0	5.0	5.0	5.0	5.0	0	0
IC402-							
①	4.8	4.8	4.8	0	4.8	0	0
②	4.8	4.8	—	4.8	4.8	4.8	0
③	4.9	4.9	4.9	4.9	4.9	4.9	0
④	0	0	0	0	0	0	0
⑤	0	0	0	0	0	0	0
⑥	0	0	0	0	0	0	0
⑦	0	0	0	0	0	0	0
⑧	4.9	4.9	4.9	4.9	4.9	4.9	4.9
⑨	4.9	4.9	4.9	4.9	4.9	4.9	0
⑩	4.9	4.9	4.9	4.9	4.9	4.9	4.9
⑪	4.9	4.9	4.9	4.9	4.9	4.9	4.9
⑫	5.0	5.0	5.0	5.0	5.0	5.0	5.0
⑬	4.8	0	4.8	4.8	4.8	4.8	0
⑭	4.9	4.9	4.9	4.9	4.9	4.9	4.9

Spannungstabellen · DC voltage tables

Servoregelung/Mechaniksteuerung Platte **0 1**

Servo/Mechacon PWB **0 1**

MODE TR No.	STOP			PLAY			REC			FWD. SEARCH			REV. SEARCH			PLAY PAUSE			REC PAUSE		
	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E
Q 5	0	4.6	0	5.1	0.1	0.1	0	4.6	0	5.1	0.1	0	5.1	0	0	5.1	0.1	0	0.1	4.6	0.1
Q15	5.0	0	5.1	5.0	0.1	5.0	5.0	0.2	5.0	4.9	0.1	5.0	5.0	0.1	4.9	5.0	0.1	5.0	5.0	0.2	5.0
Q16	5.1	0.1	0	0.1	4.6	0	5.1	0	0	0	4.6	0	0	4.6	0	0	4.5	0	5.1	0.1	0
Q19	10.2	0	10.1	10.1	0.1	10.2	10.1	0	10.2	10.1	0.1	10.1	10.1	0	10.1	10.1	0	10.1	10.2	0	10.1
Q20	5.2	0	5.2	5.1	0.1	5.2	5.1	0	5.1	5.1	0	5.1	5.1	0.1	5.1	5.1	0.1	5.1	5.1	0.1	5.2
Q22	0	10.2	0	0	10.2	0	0	10.1	0	0	10.1	0	0	10.1	0	0	10.2	0	0	10.2	0
Q23	0.1	10.2	0	0	10.1	0.1	0.1	10.2	0	0	10.1	0	0	10.1	0	0	10.2	0	0	10.1	0
Q24	3.7	0.1	0.1	0.1	2.5	0	0	2.5	0	1.2	10.1	0	5.1	3.8	0.1	0	2.5	0.1	0	2.9	0
Q25	3.9	5.1	3.3	3.8	5.2	3.3	3.9	5.1	3.4	3.9	5.2	3.4	3.9	5.1	3.3	3.8	5.2	3.4	3.9	5.1	3.4
Q26	5.0	0.1	0	5.0	0	0	0.1	3.3	0	5.0	0.1	0	5.0	0	0	5.0	0.1	0	5.0	0.1	0
Q27	4.7	0	0	0.1	7.1	0	4.6	0.1	0	0	7.1	0	0.1	7.1	0	0	7.0	0	4.6	0.1	0
Q28	0	5.0	0	0.1	4.9	0	3.7	0	0	0	5.0	0	0.1	5.0	0	0.1	5.0	0.1	0.1	5.0	0.1
Q29	0	2.0	0	5.1	0	0	5.1	0	0	5.1	0	0	5.1	0	0.1	5.1	0.1	0	5.1	0.1	0
Q30	0.1	2.7	0	3.6	0	0	3.6	0	0	3.5	0.1	0.1	3.5	0	0	3.6	0	0	3.6	0	0
Q31	5.1	0	0	5.1	0	0.1	0	0.1	0	5.1	0	0	5.1	0	0	5.1	0	0	0	0.1	0
Q33	0	5.1	0	2.1	2.5	0	2.1	2.6	0	2.1	0.5	0	2.0	2.6	0	2.1	2.5	0	2.1	2.6	0
Q34	5.0	0	0	5.0	0	0	5.0	0	0	5.0	0	0	5.0	0	0	5.0	0	0	5.0	0	0
Q36	0	5.0	0	4.5	0.1	0	0.1	5.0	0	4.6	0.1	0.1	4.6	0.1	0.1	4.6	0	0.1	0	5.1	0
Q37	0	0.1	0.1	4.1	0	0	4.2	0	0	4.2	0	0	4.2	0	0	4.2	0	0	4.2	0	0
Q38	0	4.2	0	0.1	0.1	0	0.1	4.2	0	0.1	4.2	0.1	0	4.2	0.1	0	4.2	0	0	4.2	0.1
Q39	0.1	0	0	0	1.6	0	0.1	1.5	0	0	1.6	0	0	1.5	0	0	1.5	0.1	0.1	1.6	0.1
Q40	0.5	0	0	0.1	2.5	0	0	2.6	0	0.1	2.5	0	0	2.5	0.1	0.1	2.5	0	0	2.9	0.1
Q41	5.1	3.8	0	5.1	3.8	0	0	2.1	0	5.1	3.8	0	0	2.5	0	5.1	3.8	0.1	5.1	3.8	0
Q42	0	10.2	0	0.1	10.1	0	0	10.1	0	0.1	2.5	0	0	10.1	0	0	10.1	0	0	10.2	0

Servoregelung/Mechaniksteuerung Platte **0 1** (Steckeranschlüsse)

Servo/Mechacon PWB **0 1** (Connectors)

MODE CN No.	STOP	PLAY	REC	FWD. SEARCH	REV. SEARCH	PLAY PAUSE	REC PAUSE
CN1-①	3.8	3.8	3.8	3.8	3.9	0	0.1
②	3.8	0.1	0.1	0	0.1	0	0
③	0.6	3.9	0	0.7	0.7	3.9	0.1
④	5.1	5.1	5.1	5.1	5.1	5.1	5.1
⑤	5.1	5.1	5.0	5.0	5.1	5.0	4.9
⑥	5.1	5.2	5.1	5.1	5.1	5.1	5.1
⑦	0.1	2.5	0.1	0	4.2	4.9	4.9
⑧	0.1	0	0	0.1	0	0	0.1
⑨	0	0	0	0	0	0.1	0.1
⑩	5.0	5.0	5.0	0.1	5.0	5.0	5.0
⑪	0	0	0.1	0.1	0.1	0	0
⑫	0	0.1	0	0	0	0	0
⑬	0	0	3.3	0	0.1	0	0
⑭	0.1	3.8	3.9	0.6	0.7	3.8	0.6
⑮	0.6	3.8	0.7	0.7	0	3.9	0.6
⑯	0.6	3.8	0.7	0	0.7	3.9	0.6
⑰	5.1	5.1	5.1	5.1	5.1	5.1	5.1
⑱	5.1	5.2	5.1	5.0	5.1	5.1	5.2
⑲	5.0	5.1	5.1	5.0	5.1	5.1	5.1
⑳	5.1	5.1	5.1	5.1	5.2	5.2	5.1
㉑	3.4	3.4	3.4	3.2	3.4	3.3	3.4
㉒	3.3	0.1	0.1	0.1	0.1	0	0.1
㉓	3.4	0	3.3	3.3	0	3.3	0
㉔	0	0.1	0.1	0	0	0	0
㉕	0	0	0	0	0	0	0
㉖	0	0.1	0	0	0.1	0.1	0

MODE CN No.	STOP	PLAY	REC	FWD. SEARCH	REV. SEARCH	PLAY PAUSE	REC PAUSE
CN2-①	4.0	3.9	2.6	4.0	4.0	3.9	4.0
②	0.1	4.6	0.1	4.6	4.5	4.6	0
③	5.0	0.1	5.0	0.1	0.1	0.1	5.0
④	5.1	5.0	5.0	5.0	5.0	5.0	5.0
⑤	3.0	2.7	2.7	2.6	2.6	2.6	2.8
⑥	0.4	0.4	0.4	0.4	0.4	0.4	0.4
⑦	6.7	6.7	6.4	6.6	6.7	6.3	6.7
⑧	0 0	0	0.1	0.1	0	0.1	0
CN3-①	3.1	0	0.1	0.1	0.1	0	0
②	2.0	0	0.1	0	0	0.1	0
③	4.2	0.1	0	5.1	5.1	5.0	0.1
④	0	5.0	5.0	5.0	5.0	5.0	5.0
⑤	3.1	4.0	3.8	4.0	4.1	3.9	4.0
⑥	2.0	0	0.1	0.1	0	0	0.1
⑦	4.2	2.2	2.1	2.1	2.1	2.1	2.1
⑧	0	0	0.1	0	0	0.1	0.1

Servoregelung/Mechaniksteuerung Platte **0 1** (Steckeranschlüsse)
 Servo/Mechacon PWB **0 1** (Connectors)

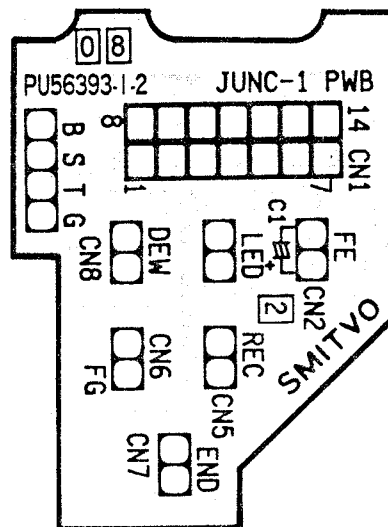
MODE CN NO.	STOP	PLAY	REC	FWD. SEARCH	REV. SEARCH	PLAY PAUSE	REC PAUSE
CN4-①	0.6	2.5	2.4	2.6	2.4	2.5	2.5
②	0.5	2.8	2.8	2.7	2.8	4.6	4.5
③	0	0	0	0	0	0.1	0
④	4.8	2.6	2.6	2.6	2.6	4.7	4.7
⑤	4.2	2.3	2.3	1.4	1.4	4.3	4.3
⑥	0.1	0.1	0.1	0.1	5.1	0.1	0
⑦	0.1	0.1	0.1	5.1	5.1	0.1	0.1
⑧	0.1	5.2	5.2	5.1	0.1	0	0.1
⑨	5.0	0	0	0.1	0	0	0
⑩	0.1	0.1	0.1	0	0	0	0.1
⑪	3.9	2.3	2.3	2.4	2.4	2.3	2.6
⑫	0.7	2.7	2.7	2.8	2.9	0.7	0.8
⑬	0	0.1	0	0	0.1	0.1	0.1
⑭	0.1	2.1	2.1	2.1	2.2	2.1	2.1
⑮	0.1	0.1	0	0	0	0.1	0
⑯	10.2	10.1	10.1	10.1	10.1	10.1	10.2
⑰	0	0	0	0	0.1	0	0.1
⑱	5.0	5.0	5.0	5.0	5.0	5.0	5.0
⑲	0.1	0	0	0.1	0	0	0
⑳	1.8	2.8	2.8	5.9	6.9	10.0	10.0
㉑	0	0.1	0.1	0	0	0	0
㉒	0	0.1	0	0	0.1	0.1	0
㉓	4.9	0	0	0.1	0	0.1	0
㉔	0.1	0	5.0	5.0	0	5.0	5.0
㉕	0.1	0.1	0	0	0	0.1	0.1
㉖	1.0	0.9	2.4	0.9	1.0	1.0	1.0
㉗	3.0	3.1	2.3	2.1	2.4	2.2	2.3
㉘	0	0	0.1	0	0.1	0.1	0
CN5-①	0.1	4.2	0.1	4.1	4.1	4.1	0
②	0	0.1	5.1	0.1	0	0	0
③	0.1	5.1	5.1	0	0.1	0.1	0.1
④	0	0.1	0	0	0	0.1	0
⑤	5.0	5.0	5.0	5.0	5.0	5.0	5.0
⑥	6.5	6.7	6.4	6.7	6.7	6.4	6.6
⑦	0.3	0.9	0.3	0.7	0.8	0.2	0.2
⑧	0.1	0	0	0	0	0	0.1
⑨	5.0	0.1	0	0.1	0	0	0
⑩	0.1	2.3	2.4	2.3	2.3	2.3	2.3
CN6-①	0.2	0.2	0.2	0.1	0.1	0.1	0.2
②	0	0.1	0	0	0	0	0
③	0	0	0	0.1	0.1	0	0
④	0	0	0.1	0.1	0	0	0.1
⑤	0.1	0.1	0.1	0.1	0.1	0.1	0.1
⑥	0.2	0.5	0.3	0.7	0.8	0.3	0.2
⑦	0.1	0.4	0.1	1.1	0.7	0.2	0.1
⑧	0.9	0.8	1.0	1.6	4.3	0.8	0.9
⑨	4.6	4.6	4.4	1.2	1.9	1.4	1.3
⑩	2.1	2.2	2.2	2.2	2.1	2.2	2.1
⑪	0	0	0	0.1	0	0	0
⑫	0.5	0.4	0.4	0.5	0.4	0.5	0.4
⑬	5.1	5.0	5.0	5.0	5.0	5.0	5.0
⑭	0.1	0.1	0	0	0.1	0	0
CN7-①	0	0	0.1	0.1	0.1	0	0.1
②	0	0.1	0.1	0	0	0	0

MODE CN No.	STOP	PLAY	REC	FWD. SEARCH	REV. SEARCH	PLAY PAUSE	REC PAUSE
CN8-①	0	0	0	0.1	0	0.1	0
②	0	0	0.1	0	0.1	0	0
③	0	2.9	2.9	3.0	3.0	2.9	3.3
④	0.1	2.8	2.9	3.0	2.9	2.9	3.3
⑤	0.1	2.9	3.0	3.0	3.0	2.9	3.3
⑥	3.6	3.5	3.6	3.6	3.6	3.6	3.6
⑦	4.3	4.3	4.3	4.3	4.4	4.3	4.2
⑧	3.6	3.6	3.6	3.5	3.7	3.6	3.6
⑨	0.9	0.8	0.8	0.8	0.9	0.8	0.8
⑩	0	0	0	0	0	0	0
⑪	2.2	2.2	2.2	2.2	2.4	2.2	2.2
⑫	0.8	0.8	0.8	0.8	0.8	0.8	0.8
⑬	2.3	2.2	2.2	2.3	2.2	2.2	2.3
CN9-①	0.1	0	0	0	0	0	0
②	0.1	0.1	0	0.1	0	0	0
CN10-①	4.3	2.2	2.1	2.1	2.1	2.1	2.1
②	4.3	2.8	2.7	2.6	2.9	2.4	2.9
③	6.5	4.6	2.4	5.0	5.2	5.2	2.4
④	6.4	4.5	2.3	5.4	5.0	5.2	2.2
⑤	0	0.1	0.1	0	0	0	0
⑥	0.1	5.0	2.3	5.1	4.3	5.0	2.1
⑦	6.5	4.4	2.4	5.1	5.3	0	1.4
⑧	0	0	0.1	0.1	0	0	0
CN11-①	5.0	5.0	0.1	0	0	0.1	5.0
②	5.2	5.2	5.1	5.1	5.1	5.1	5.1
③	0.1	0.1	0	0.2	0.2	0.2	0.1
④	2.9	3.9	3.8	4.1	4.1	3.9	4.2
⑤	0	0.1	0	0	0	0	0
⑥	0.1	0	0.1	0	0	0.1	0
⑦	0	0	0	0	0	0.1	0.1
⑧	0.1	0	0	0	0.1	0	0
⑨	5.0	5.0	5.0	5.0	5.0	5.0	5.0
⑩	6.6	6.4	6.4	6.7	6.6	6.4	6.9
⑪	0.1	0	0	0	0.1	0	0.1
⑫	10.1	10.1	10.1	10.1	10.0	10.1	10.1
⑬	5.1	5.2	5.2	5.1	5.1	5.1	5.1
CN12-①	5.1	5.2	5.1	5.1	5.2	5.2	5.1
②	0.1	0	0	0	0	0	0
③	0.5	2.8	2.8	3.2	2.6	2.5	4.6
④	0	2.8	2.8	2.4	2.7	2.5	4.5
⑤	0.1	0	0	0	0	0.1	0.1

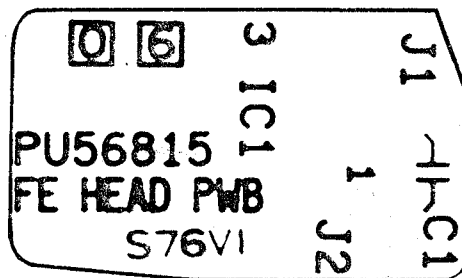
0 4 Audio/Servo Platte (Steckeranschlüsse)
Audio/Servo PWB (Connectors)

MODE CN No.	STOP	PLAY	REC	FWD. SEARCH	REV. SEARCH	PLAY PAUSE	REC PAUSE
CN2-①	7.9	5.1	7.5	5.3	5.3	5.3	7.9
②	7.9	5.1	7.5	5.3	5.3	5.4	8.0
CN3-							
①	0	0	0	0	0	0	0
②	0	0	0	0	0	0	0.1
③	0	0	0	0	0	0.1	0.1
CN4-							
①	0	0	0	0.1	0.1	0	0
②	4.3	4.2	4.3	4.2	4.2	4.2	4.3
③	2.0	1.8	1.8	1.7	1.7	1.6	1.6
CN5-							
①	0	0	0	0	0	0.1	0
②	0	0	0	0	0	0	0
③	7.9	7.9	7.7	7.9	8.0	8.0	7.9
CN11-							
①	5.0	0	0.1	0	0	0	0
②	5.0	0.1	0.1	0	0	5.0	5.0
③	0	5.0	5.1	4.9	0	5.0	5.0
④	0	0	0.1	0	0	0	0
CN12-							
①	2.4	0.1	0.1	2.5	0	2.3	0.2
②	0	0	0	0.1	0.1	0	0
③	0.1	0.1	0	0.1	0.1	0.1	0
CN13-							
①	0	0.1	0.1	0	0	0	0
②	0	0.1	0	0	0	0.1	0
CN14-							
①	0	0	0	0	0.1	0	0.1
②	0	0	0.1	0	0	0.1	0.1
③	0.1	2.2	2.2	5.8	0.1	1.8	0
④	0	0.1	0	0.1	0	0.1	0
⑤	0	0	0.1	0.1	6.3	0.1	0.1

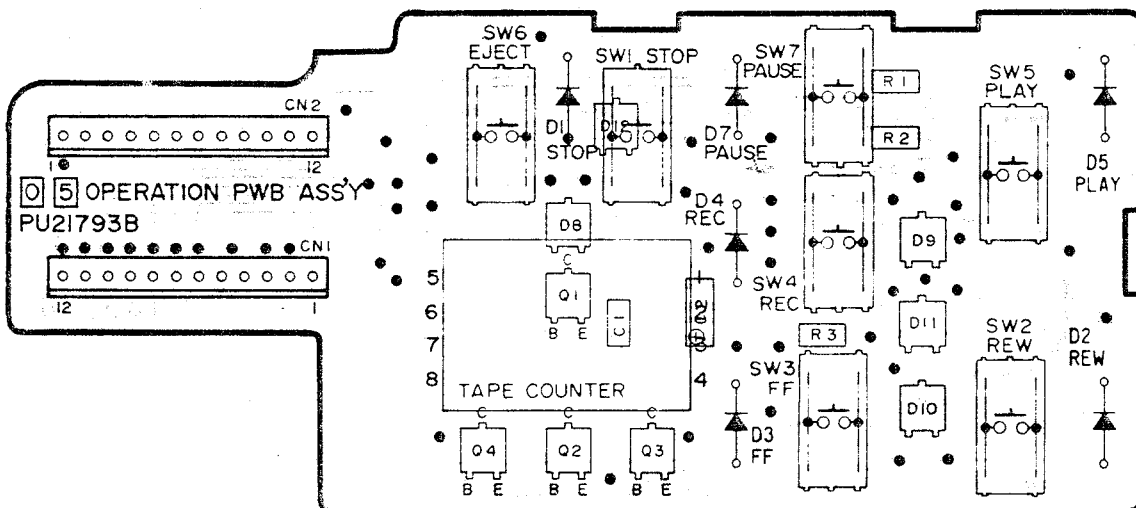
08 Verbindungsplatte Junction PWB



0 6 Löschkopfplatte
Full erase head PWB



**0 5 Tastenplatte
Operation PWB**

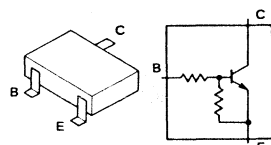


Mechaniksteuerung Schaltbild Mechacon circuit diagram

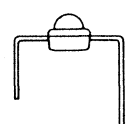
MCM1053



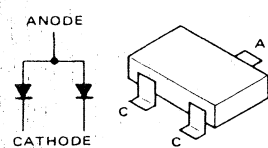
DTC114YK



GL-1HD202



MA151WA



NOTES: Unless otherwise specified.

1. All resistance values are in ohms.
2. All inductance values are in H.
3. All capacitance values are in μ F.

: Chip capacitor

: Electrolytic capacitor

: Non-polar capacitor

: Tantalum capacitor

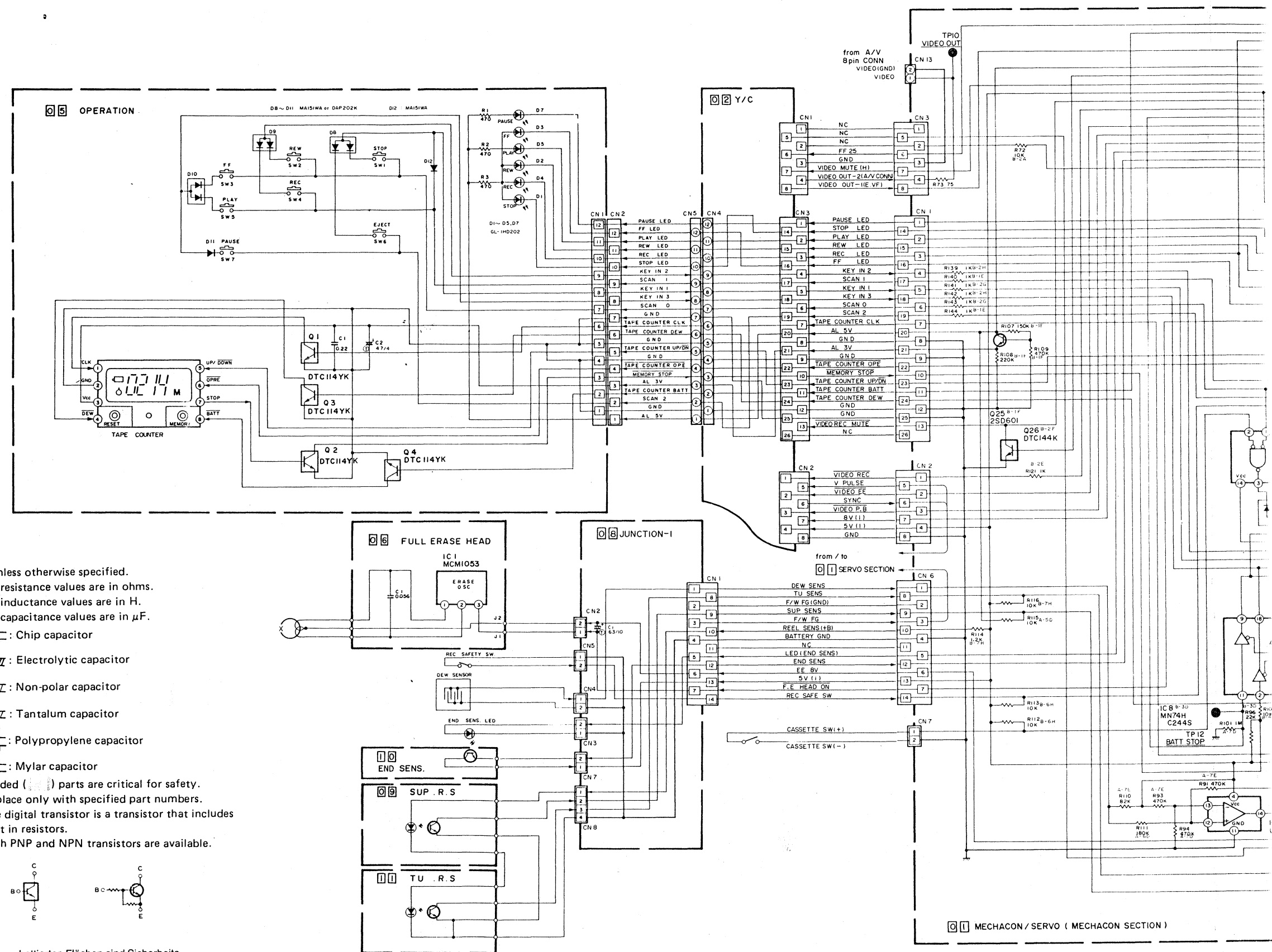
: Polypropylene capacitor

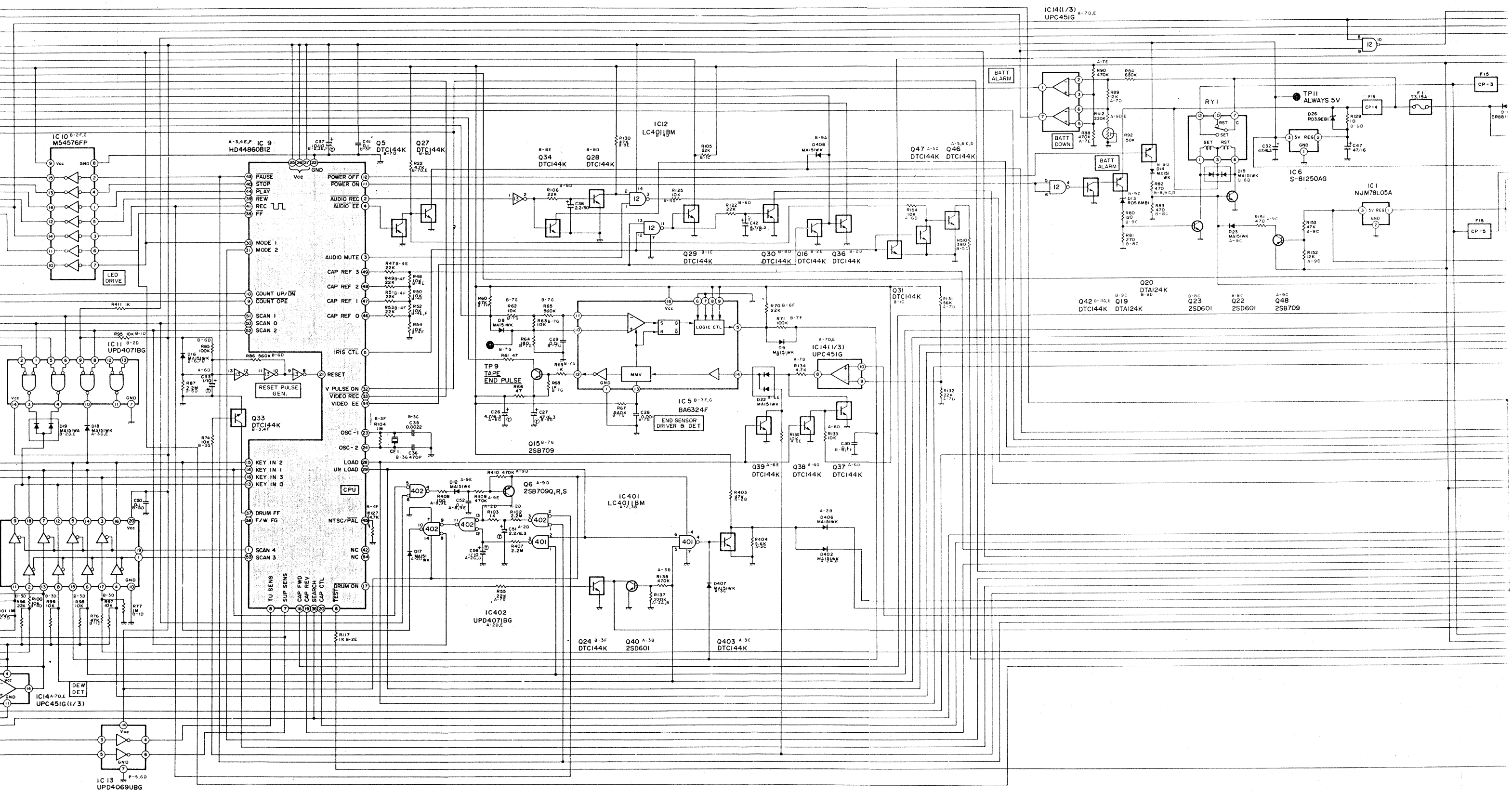
: Mylar capacitor

4. Shaded () parts are critical for safety. Replace only with specified part numbers.
 5. The digital transistor is a transistor that includes built in resistors.
- Both PNP and NPN transistors are available.



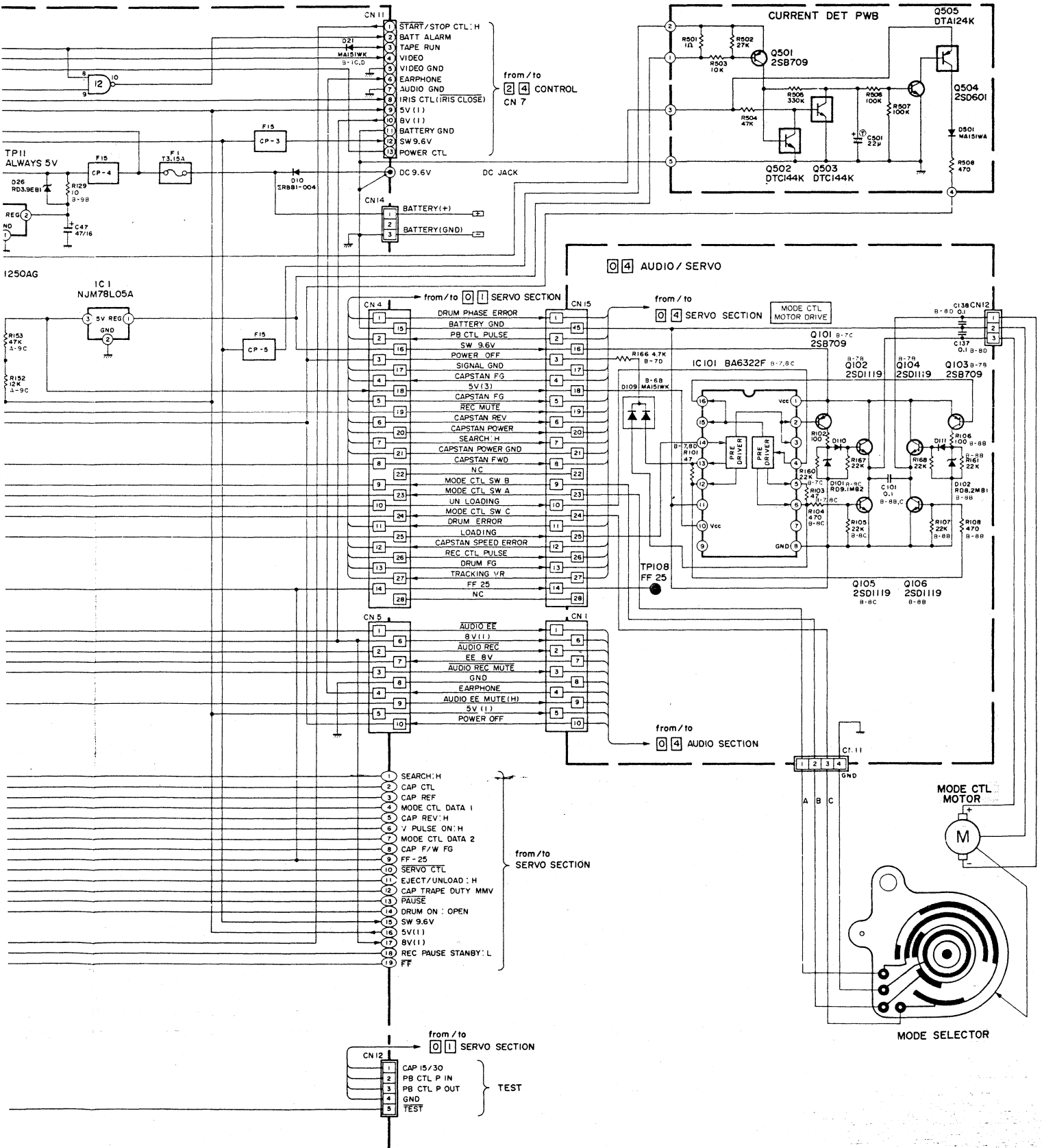
Hinweis:
Bauteile in den schattierten Flächen sind Sicherheits-
bauteile! Nur gegen Original-Ersatzteile wechseln!

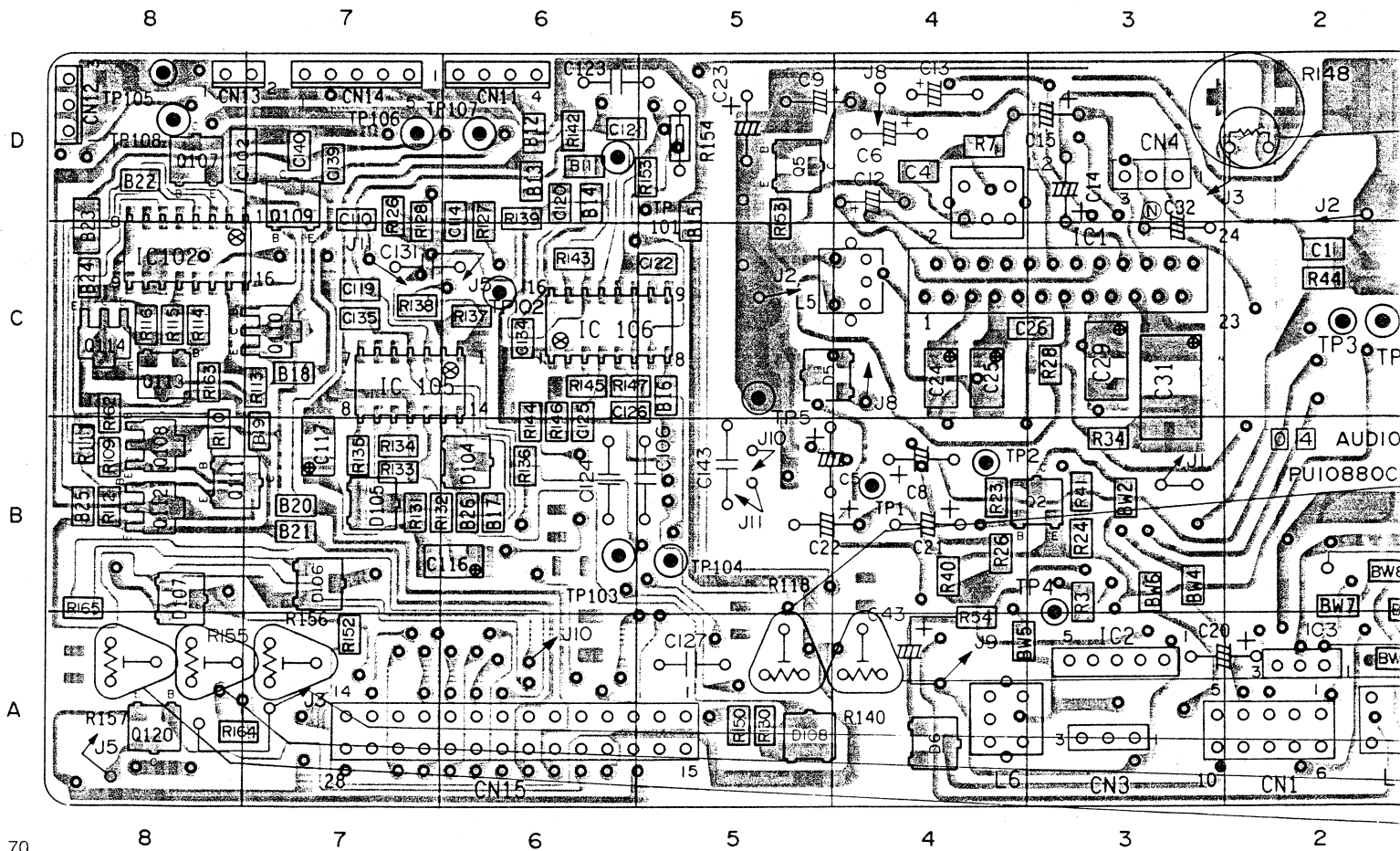
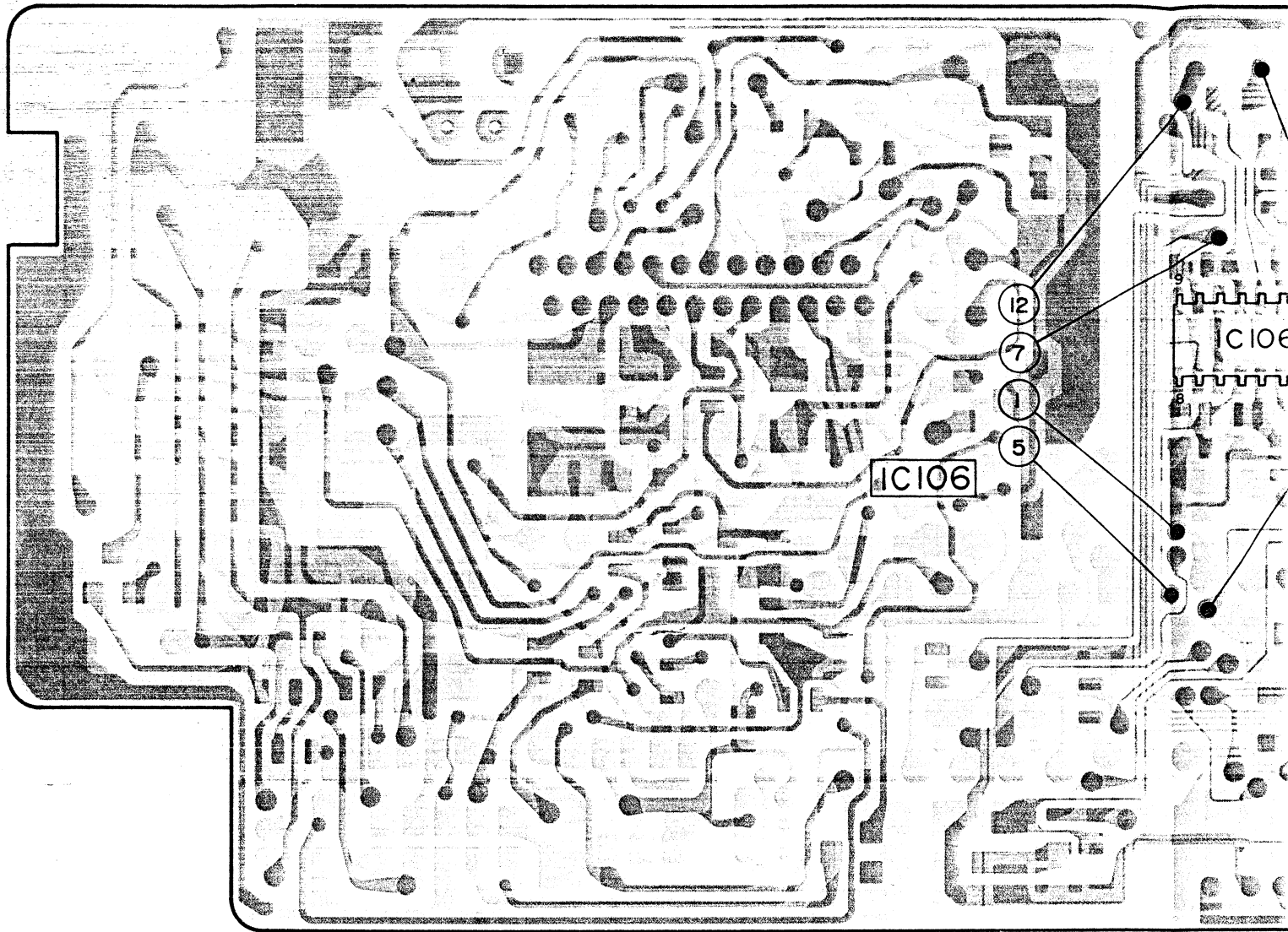


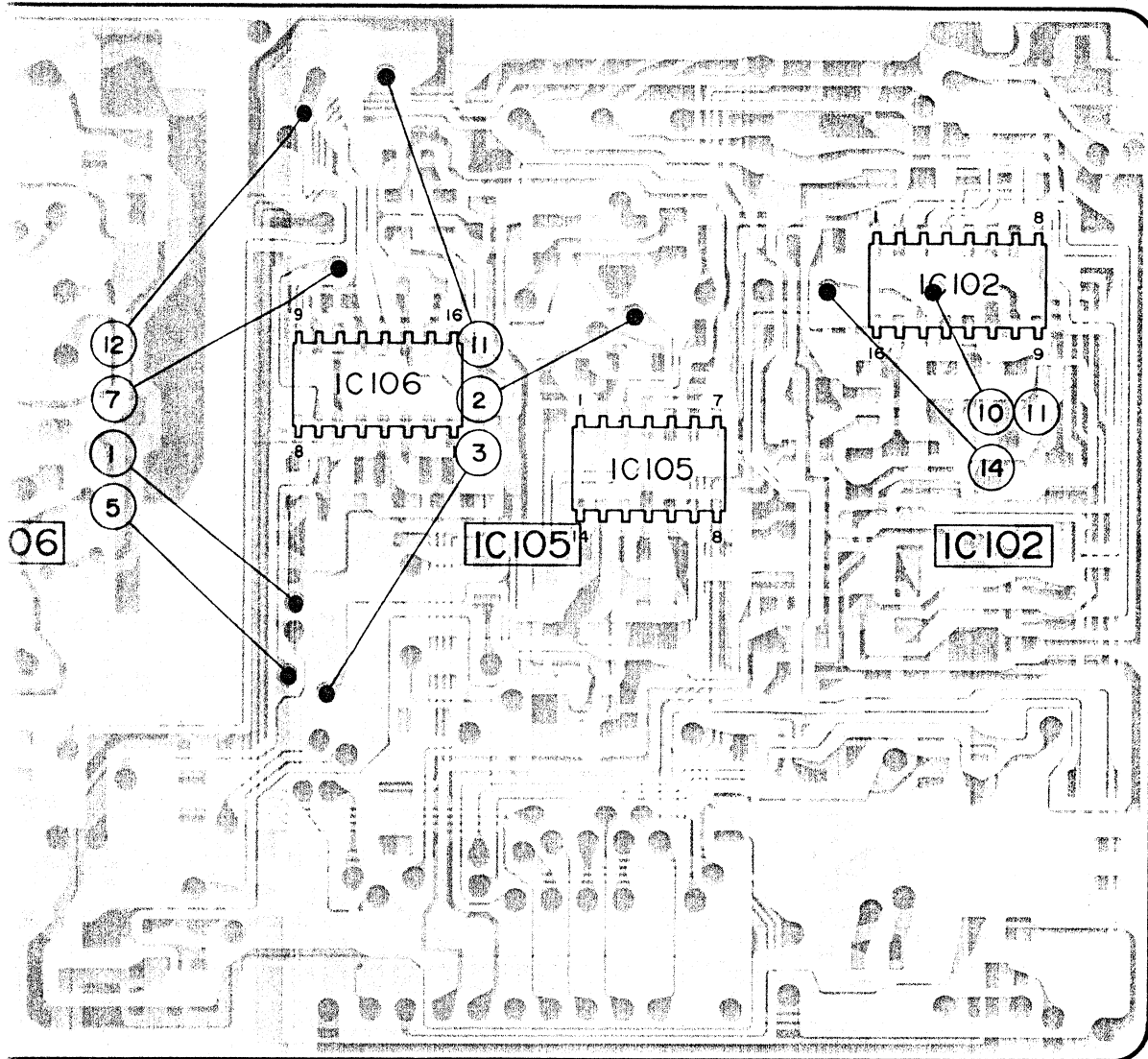


Mechaniksteuerung Schaltbild

Mechacon circuit diagram







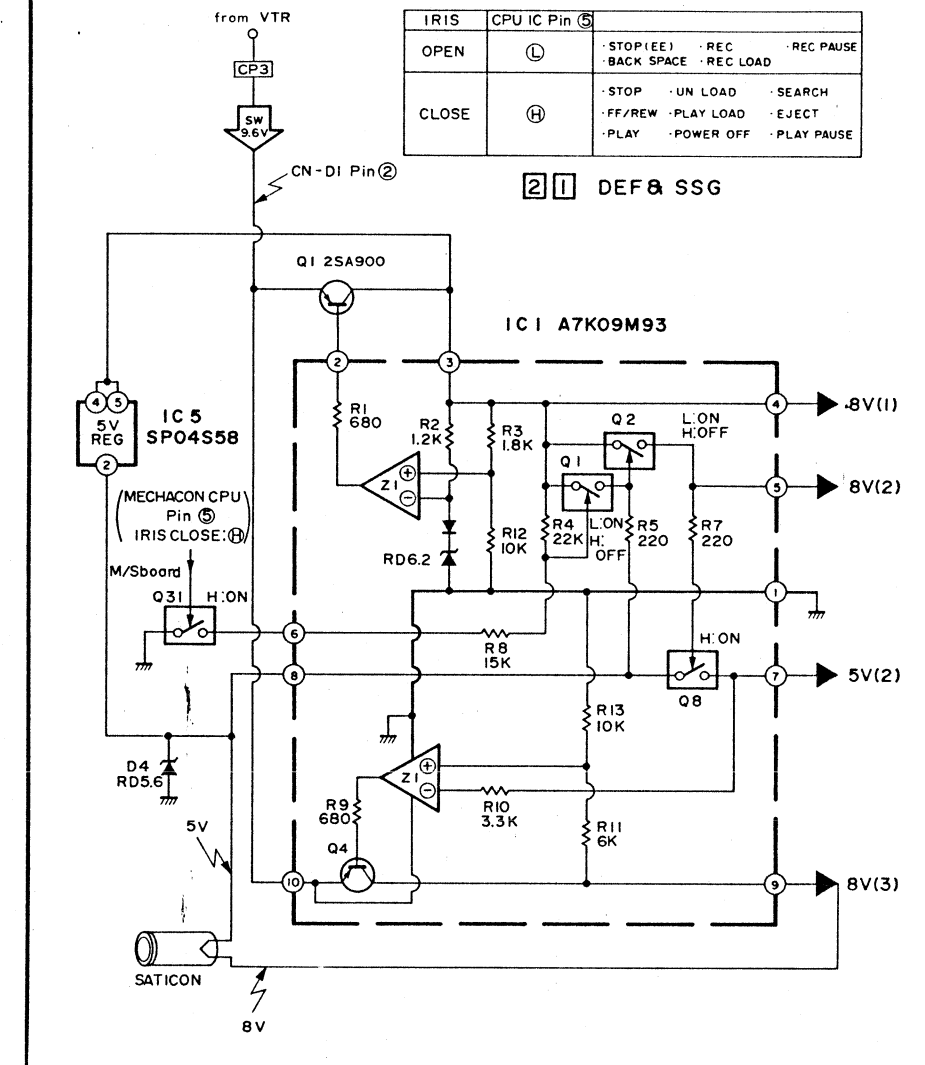
0 4 (Audio)-Servoplatte (IC-Anschlüsse)
(Audio)-Servo PWB (IC-pin tocation)

0 4 (Audio)-Servoplatte
(Audio)-Servo PWB

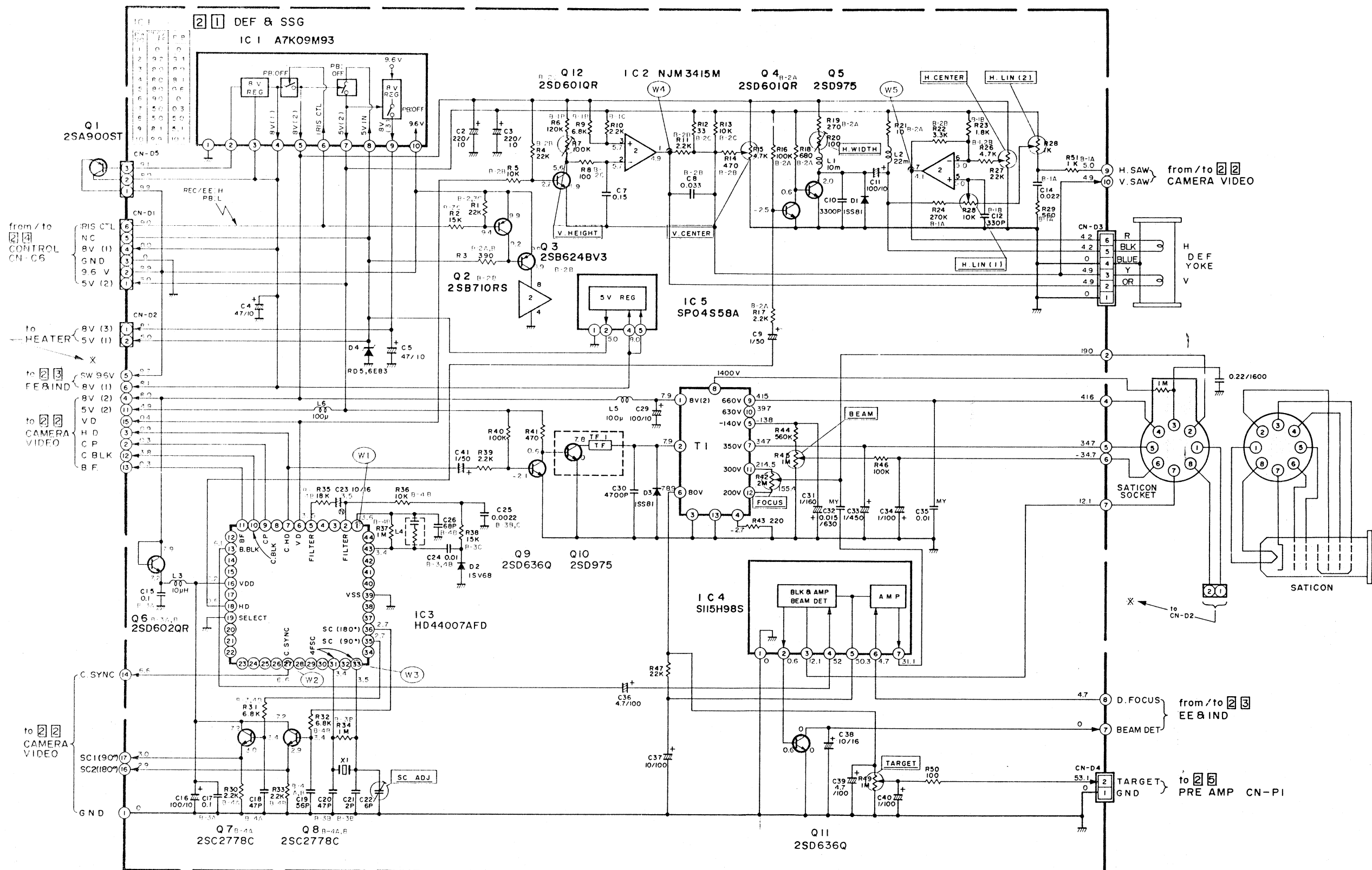
Funktion IC 1 (Ablenkplatte)
Function IC 1 (Def + SSG PWB)

IRIS	CPU IC Pin 5	STOP (EE)	REC	REC PAUSE
OPEN	(L)	BACK SPACE	REC LOAD	
CLOSE	(H)	STOP	UN LOAD	SEARCH
		FF/REW	PLAY LOAD	EJECT
		PLAY	POWER OFF	PLAY PAUSE

2 1 DEF & SSG



2 1 Ablenkplatte Schaltbild DEF + SSG circuit diagram



NOTES:

- parts are importantly related to safety.
When replacing them, make sure to use specified parts.
- Voltage and waveform measurements.
Voltage: Measured with digital voltmeter in DC range at iris closed.
Waveform: With greyscale completely filling the picture area at auto-iris.

Hinweis:

- Alle Gleichspannungen sind mit einem Digital-Voltmeter gemessen, bei geschlossener Blende.
- Oszillogramme: Grautreppe, Blende auf Automatik.
- Bauteile in schraffierten Flächen sind Sicherheits-Bauteile! Nur gegen Original-Ersatzteile wechseln!

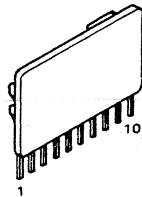
NOTES: Unless otherwise specified.

- All resistance values are in ohms.
 - All inductance values are in H.
 - All capacitance values are in μF .
- \square : Chip capacitor
 \square : Electrolytic capacitor
 \square : Tantalum capacitor
 \square : Mylar capacitor
 \square : Non-polar capacitor
 \square : Polypropylene capacitor

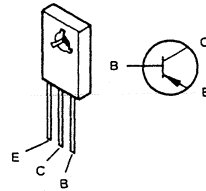
**2 1 Ablenkplatte
DEF + SSG PWB**

C22
SC ADJ

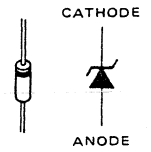
A7K09M93



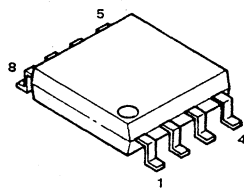
2SA900ST



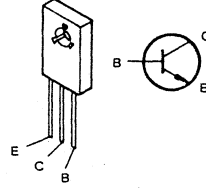
RD5.6EB3



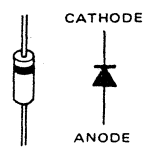
NJM3415M



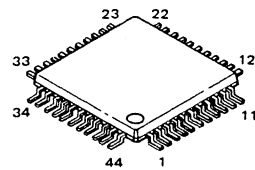
2SD975



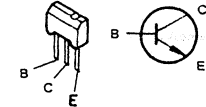
1SV68



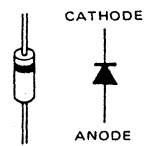
HD44007AFD



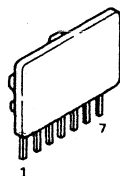
2SD636Q



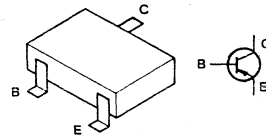
1SS81



S115H98S



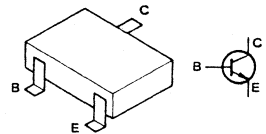
2SB624BV3
2SB710RS

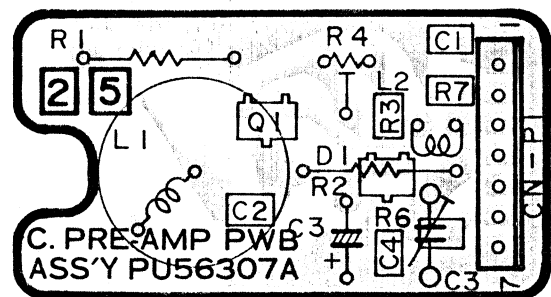
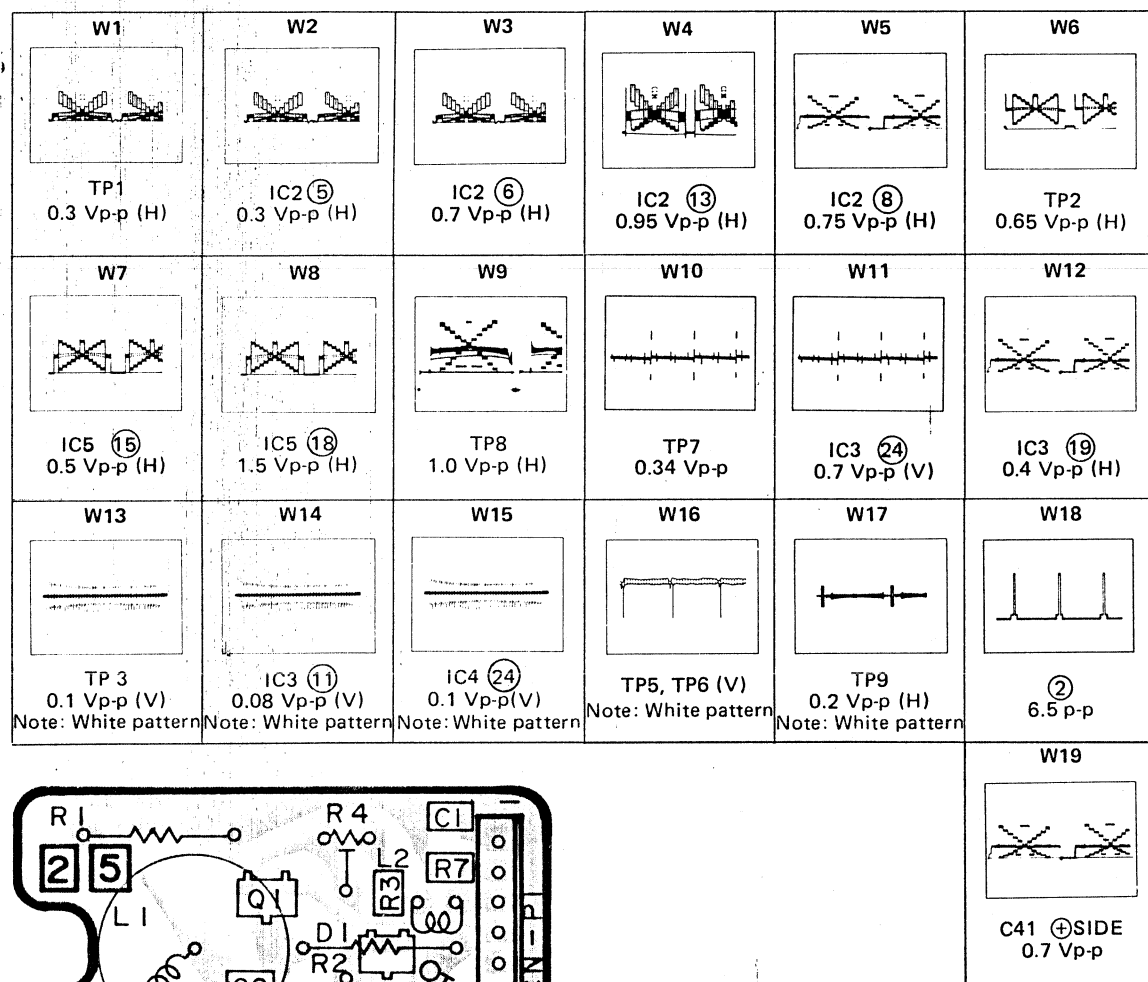


SP04S58A

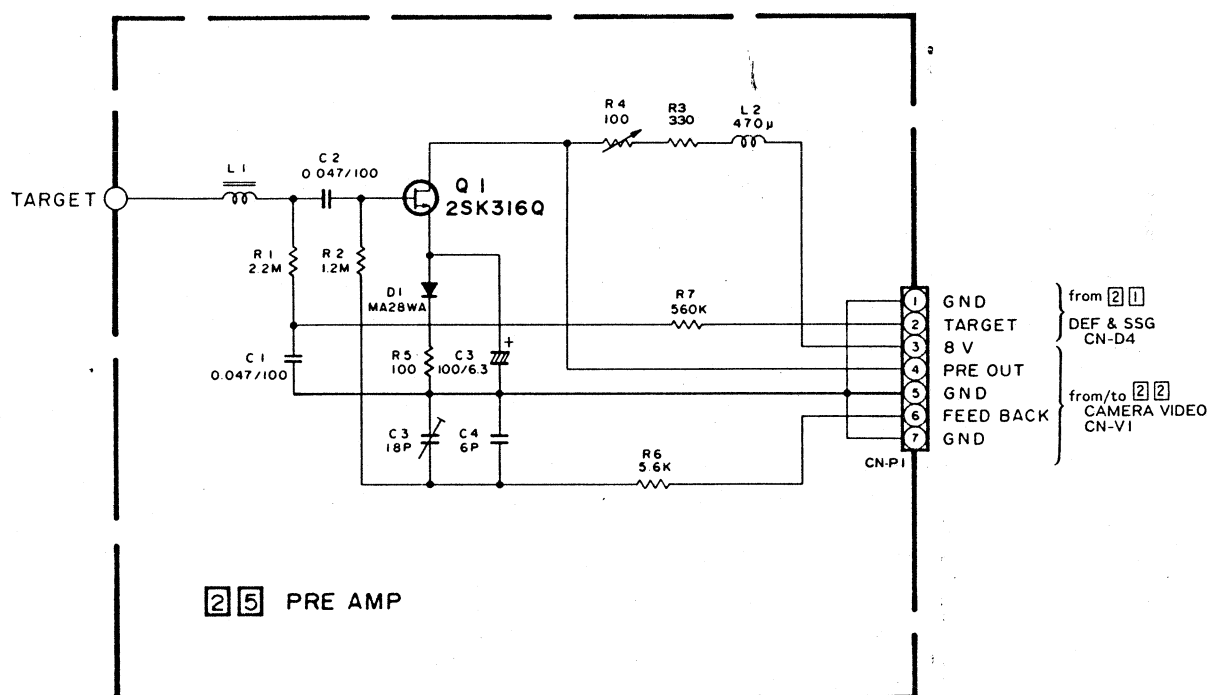


2SC2778C
2SD601QR
2SD602QR



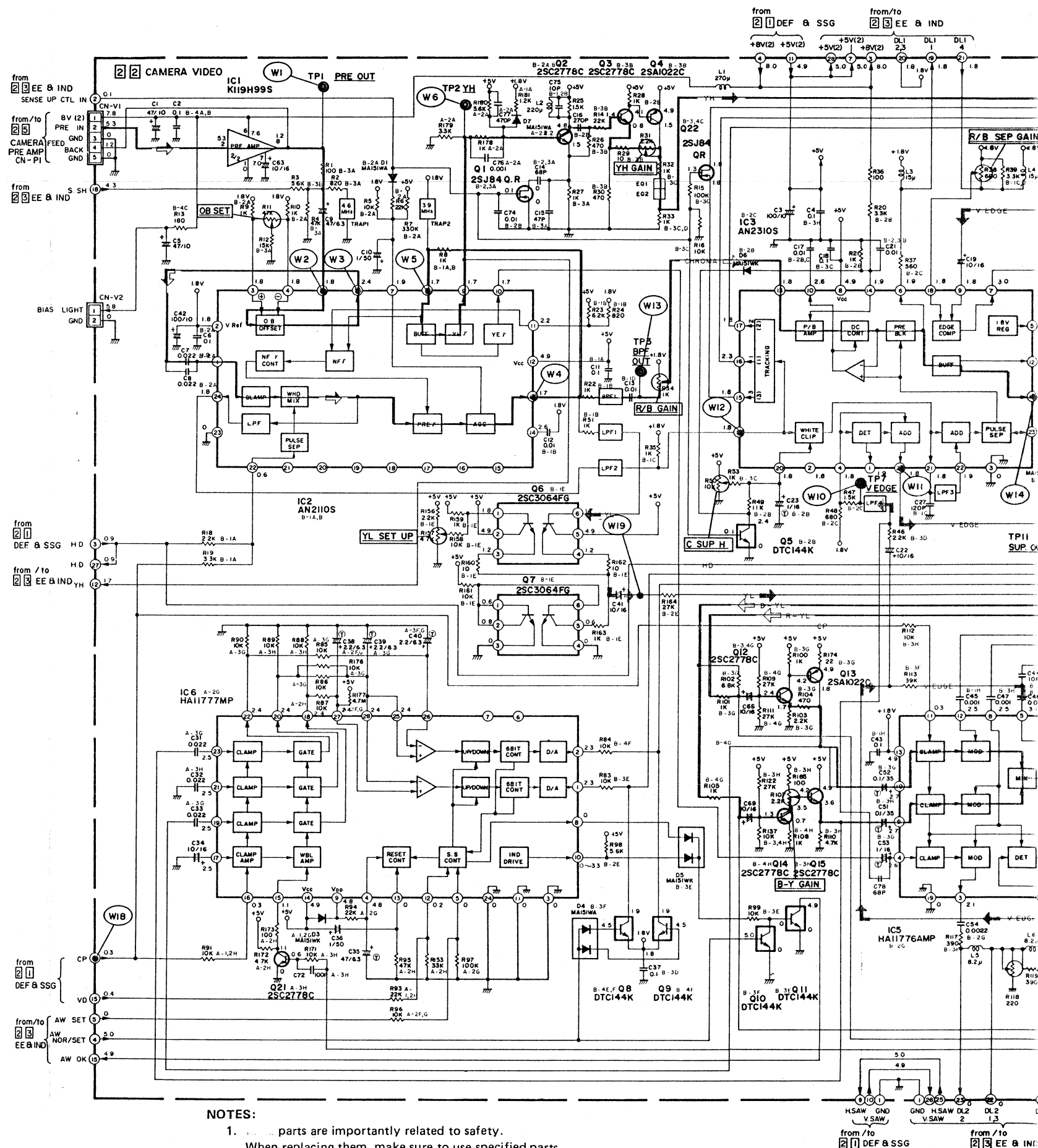


2 5 Vorverstärker Preamplifier



NOTES: Camera amp R4 and C3 are adjusted at the factory.
Replace the entire camera pre-amp ass'y as a unit.
Readjustment of R4 and C3 is not required, even after replacing the Saticon.

Hinweis:
R4 und C3 sind fest eingestellt.
Ein Abgleich ist nicht erforderlich.



NOTES:

1. **Parts** are importantly related to safety.
When replacing them, make sure to use specified parts.
2. **Voltage and waveform measurements**
Voltage: Measured with digital voltmeter in DC range at iris closed
Waveform: With greyscale completely filling the picture area at auto-iris

2 2

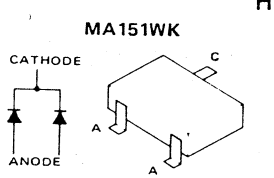
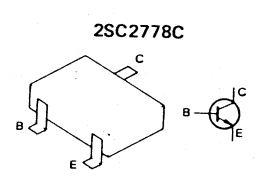
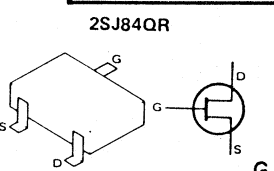
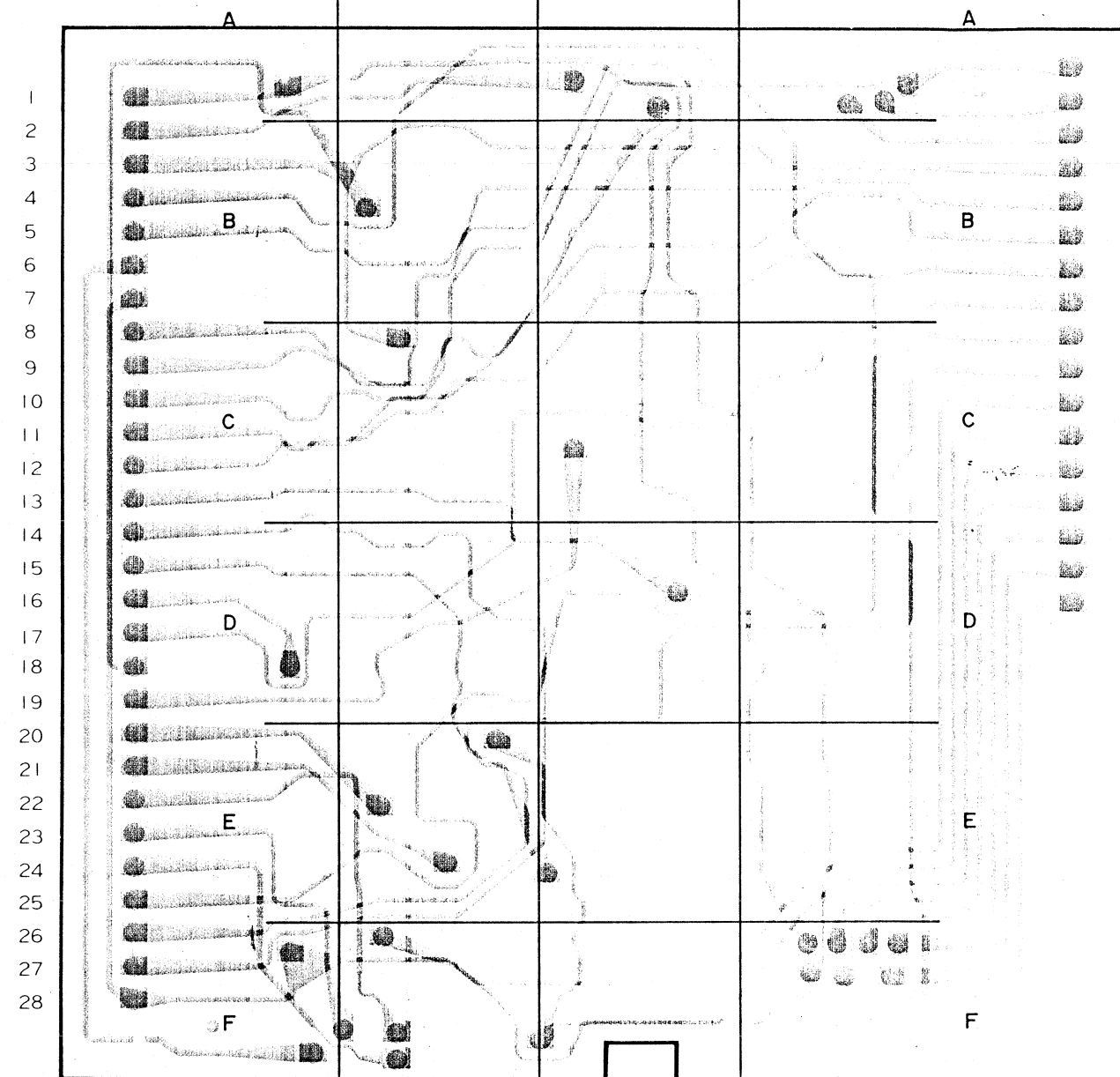
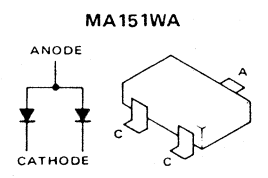
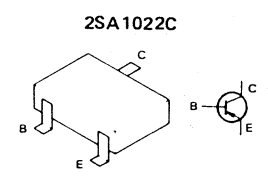
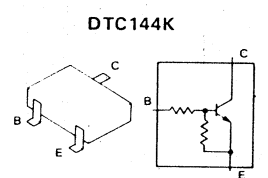
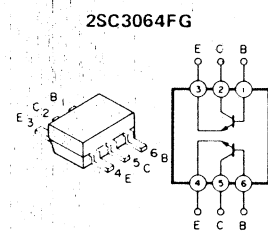
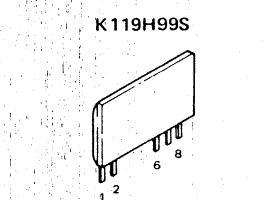
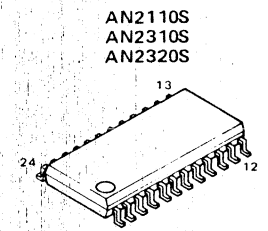
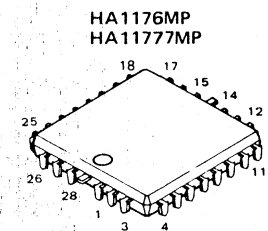


- Hinweis:**

- 79

2 3
E-E &
IND

— Flexible board —



2 1
DEF &
SSG



1
2
3
4
5
6
7
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9
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11
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14
15
16
17

R61
R TRACK (3)

R60
R TRACK (2)

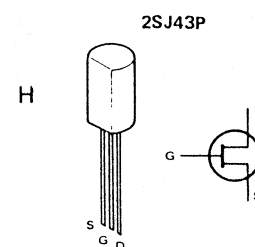
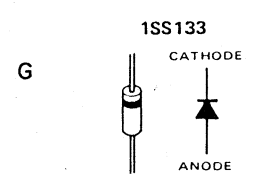
R59
R TRACK (1)

R69
R SET UP

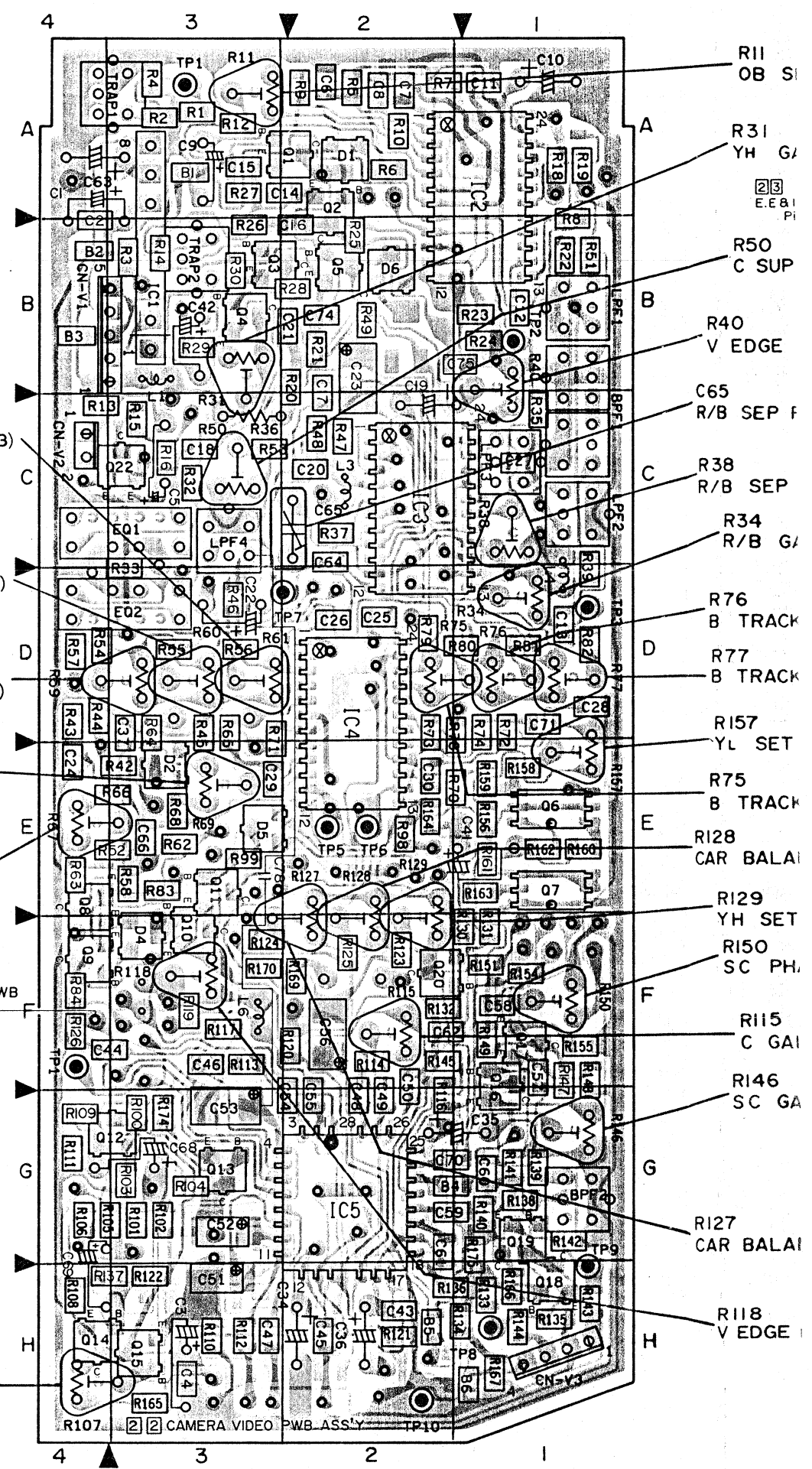
R67
R GAIN

To 2 3
EE & IND PWB
⑨

R107
B-Y GAIN



—Rear side—



R11
OB SI

R31
YH GA

2 3
E.E.B1
PI

R50
C SUP

R40
V EDGE

C65
R/B SEP F

R38
R/B SEP

R34
R/B GA

R76
B TRACK

R77
B TRACK

R157
YL SET

R75
B TRACK

R128
CAR BALAI

R129
YH SET

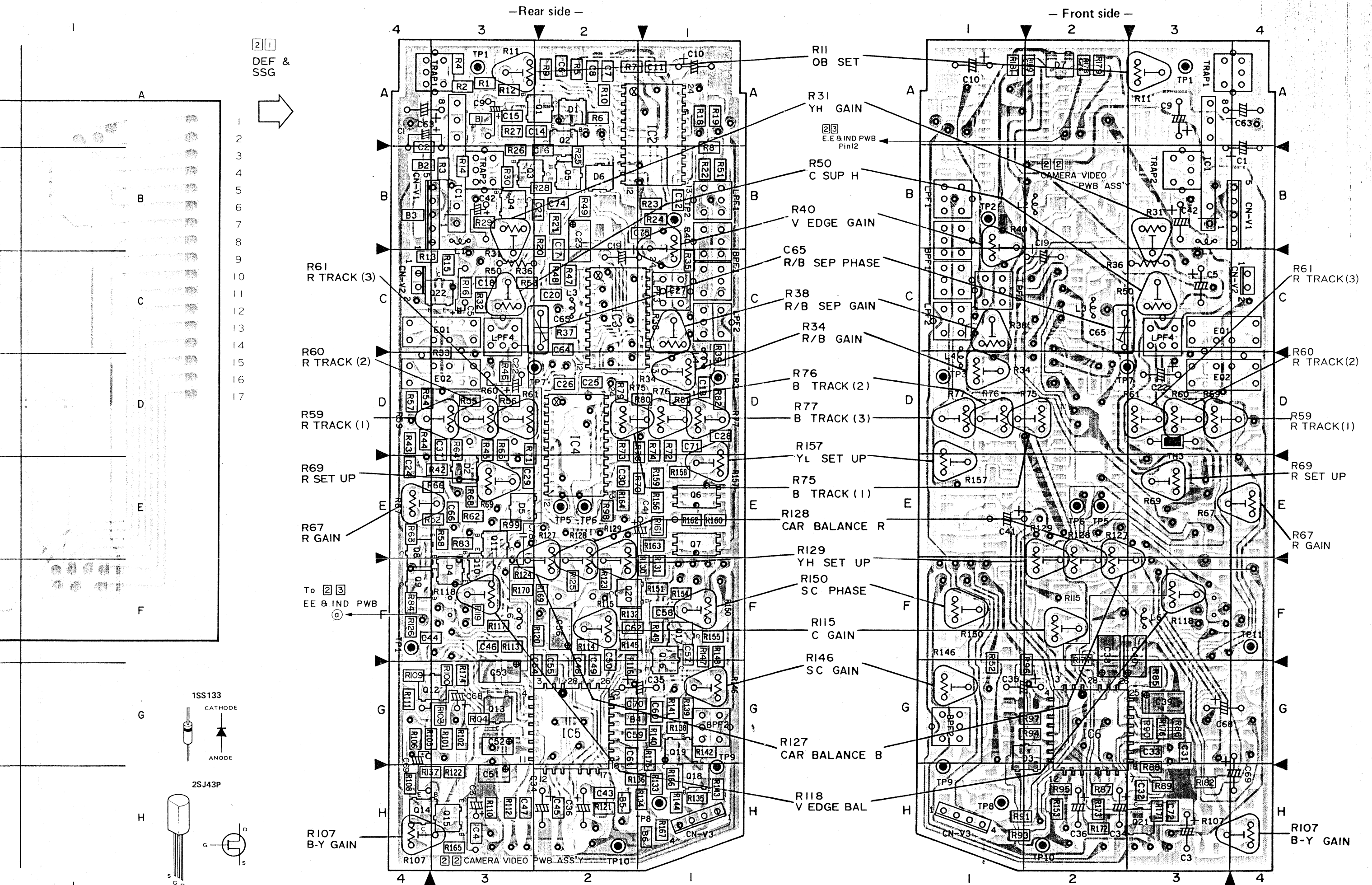
R150
SC PH.

R115
C GA

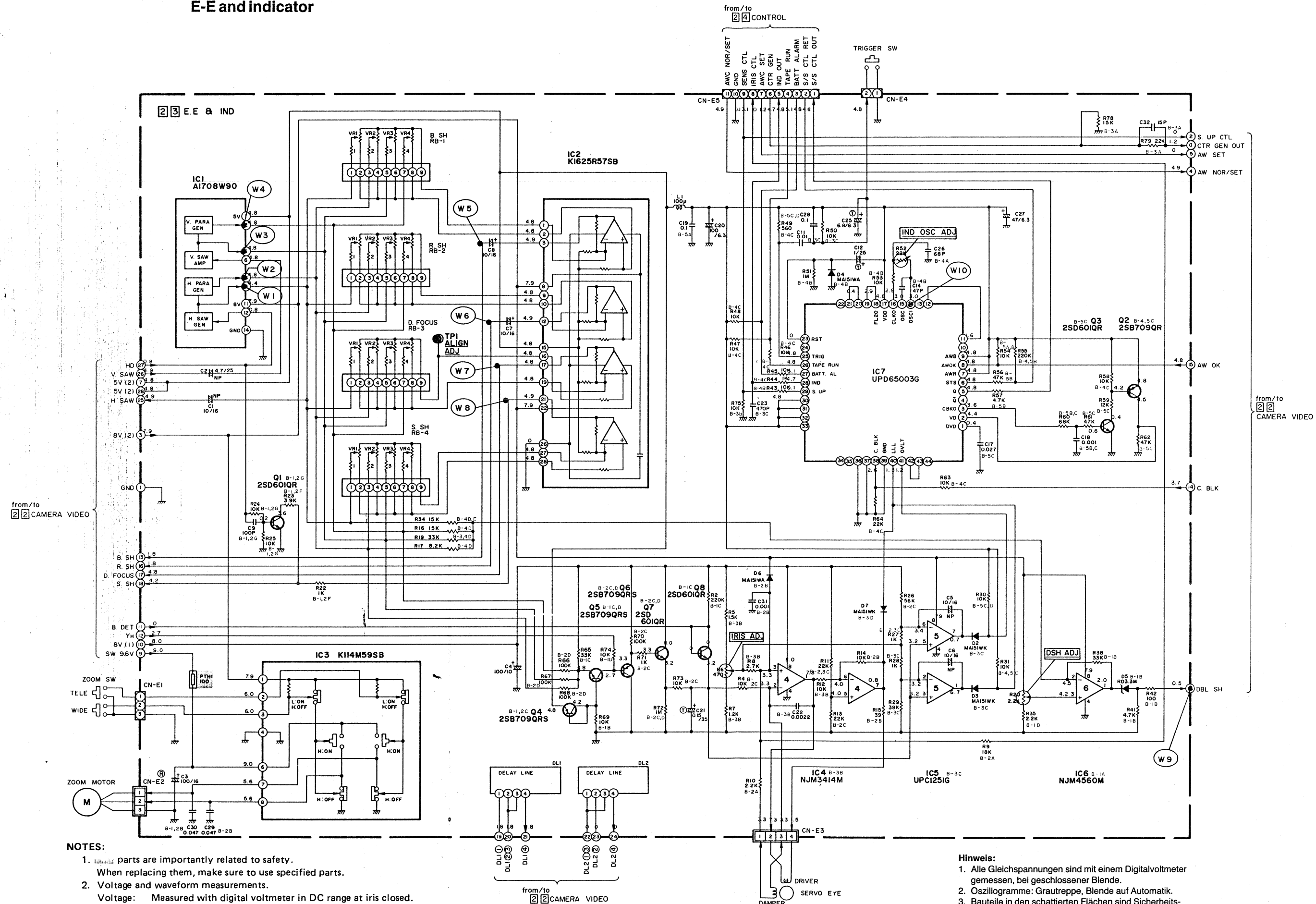
R146
SC GA

R127
CAR BALAI

R118
V EDGE



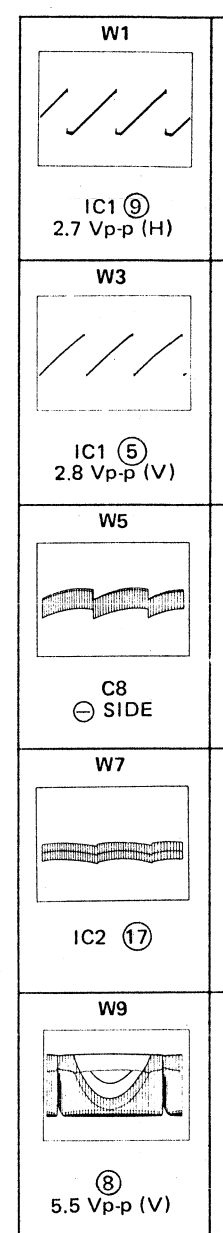
2 3 E-E und Anzeigenplatte
E-E and indicator

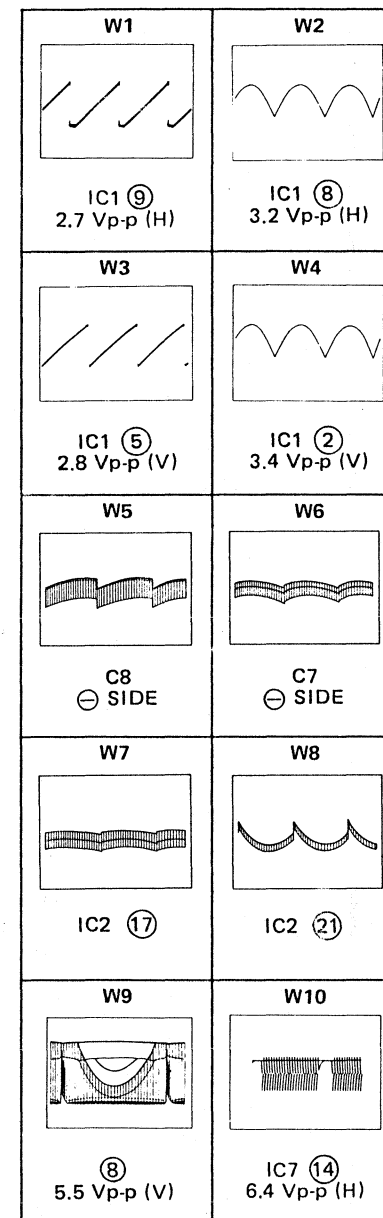
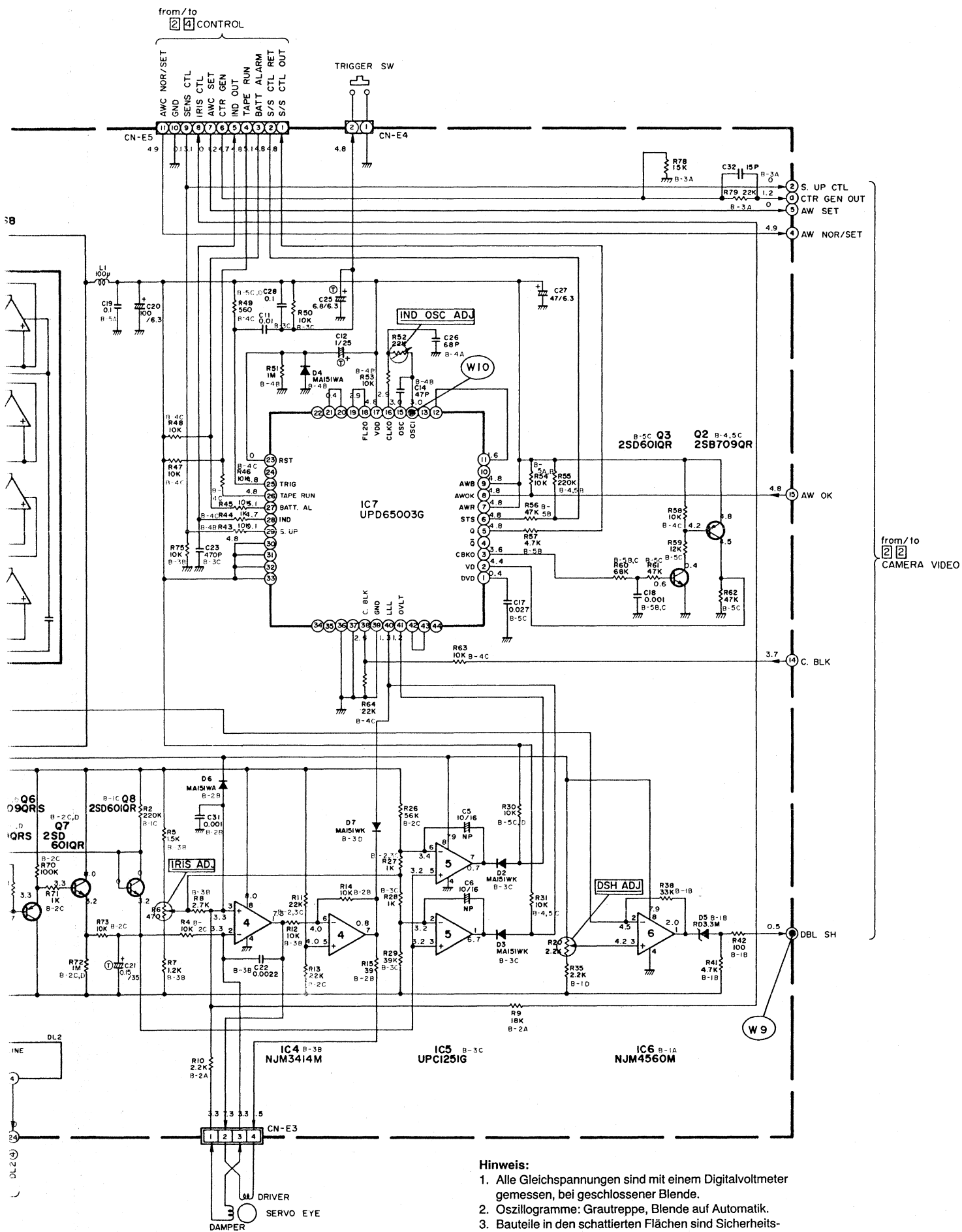


1. ~~These~~ parts are importantly related to safety.
When replacing them, make sure to use specified parts.
2. Voltage and waveform measurements.
Voltage: Measured with digital voltmeter in DC range at iris closed.
Waveform: With greyscale completely filling the picture area at auto-iris.

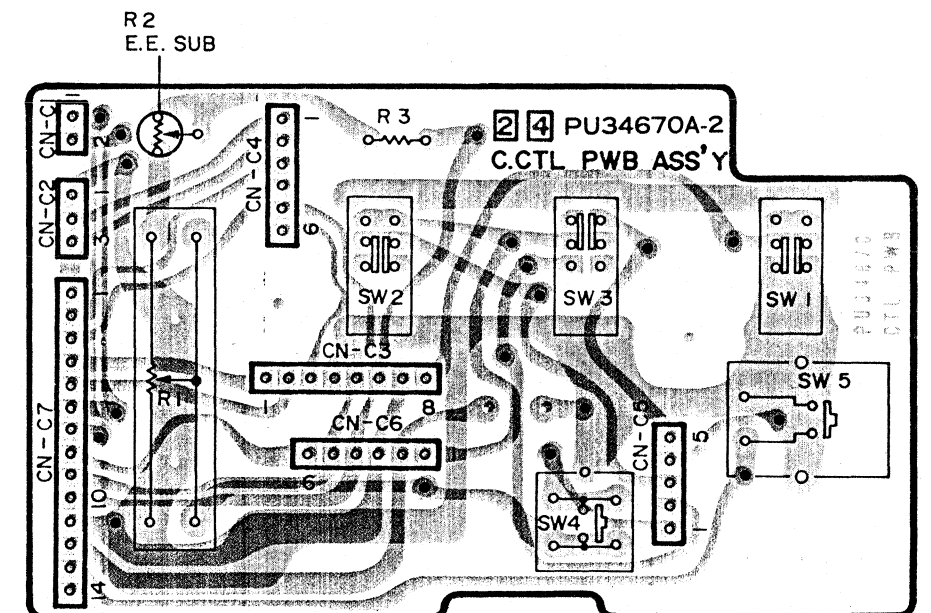
Hinweis:

1. Alle Gleichspannungen sind mit einem Digitalvoltmeter gemessen, bei geschlossener Blende.
2. Oszillogramme: Grautreppe, Blende auf Automatik.
3. Bauteile in den schattierten Flächen sind Sicherheitsbauteile! Nur gegen Original-Ersatzteile auswechseln!

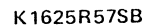
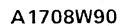
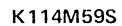
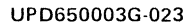
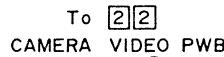




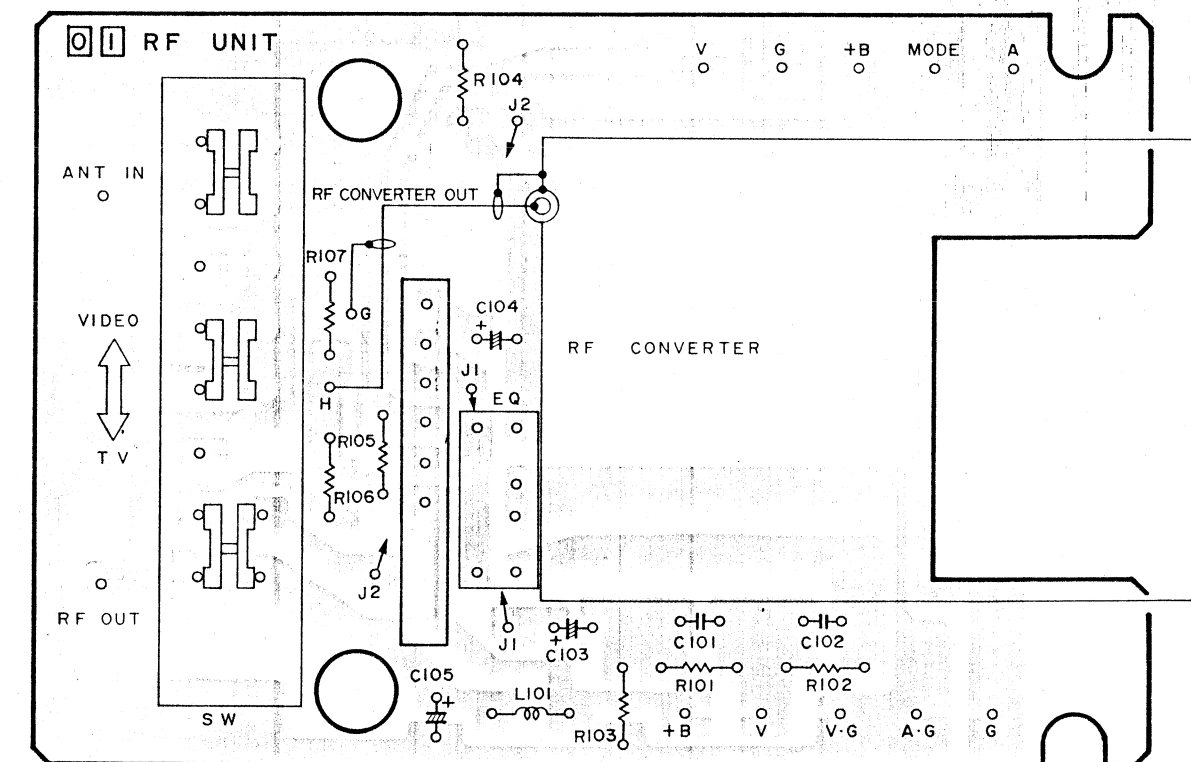
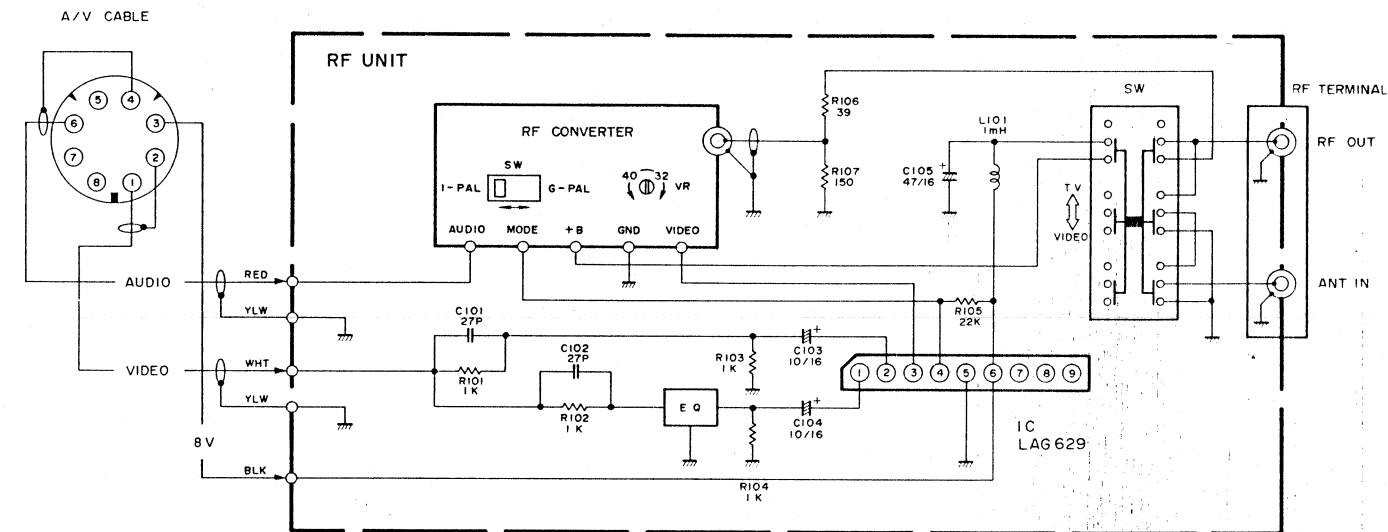
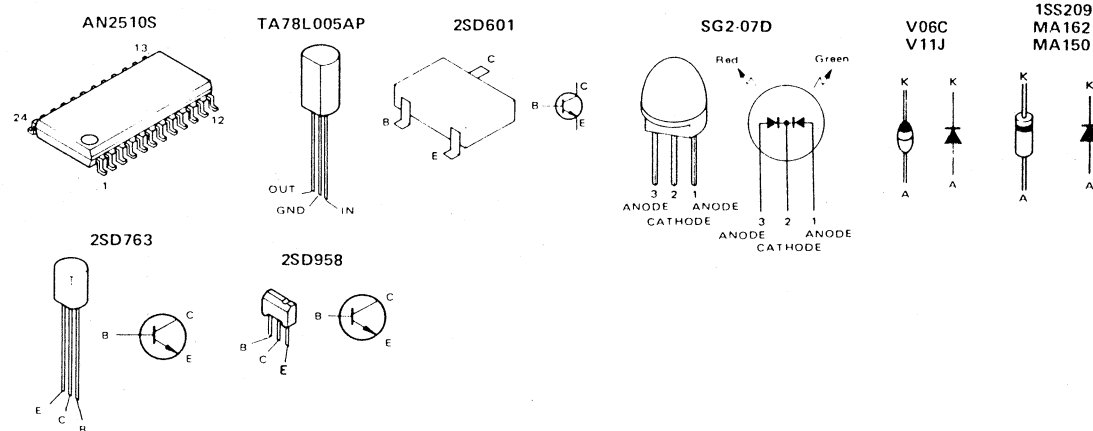
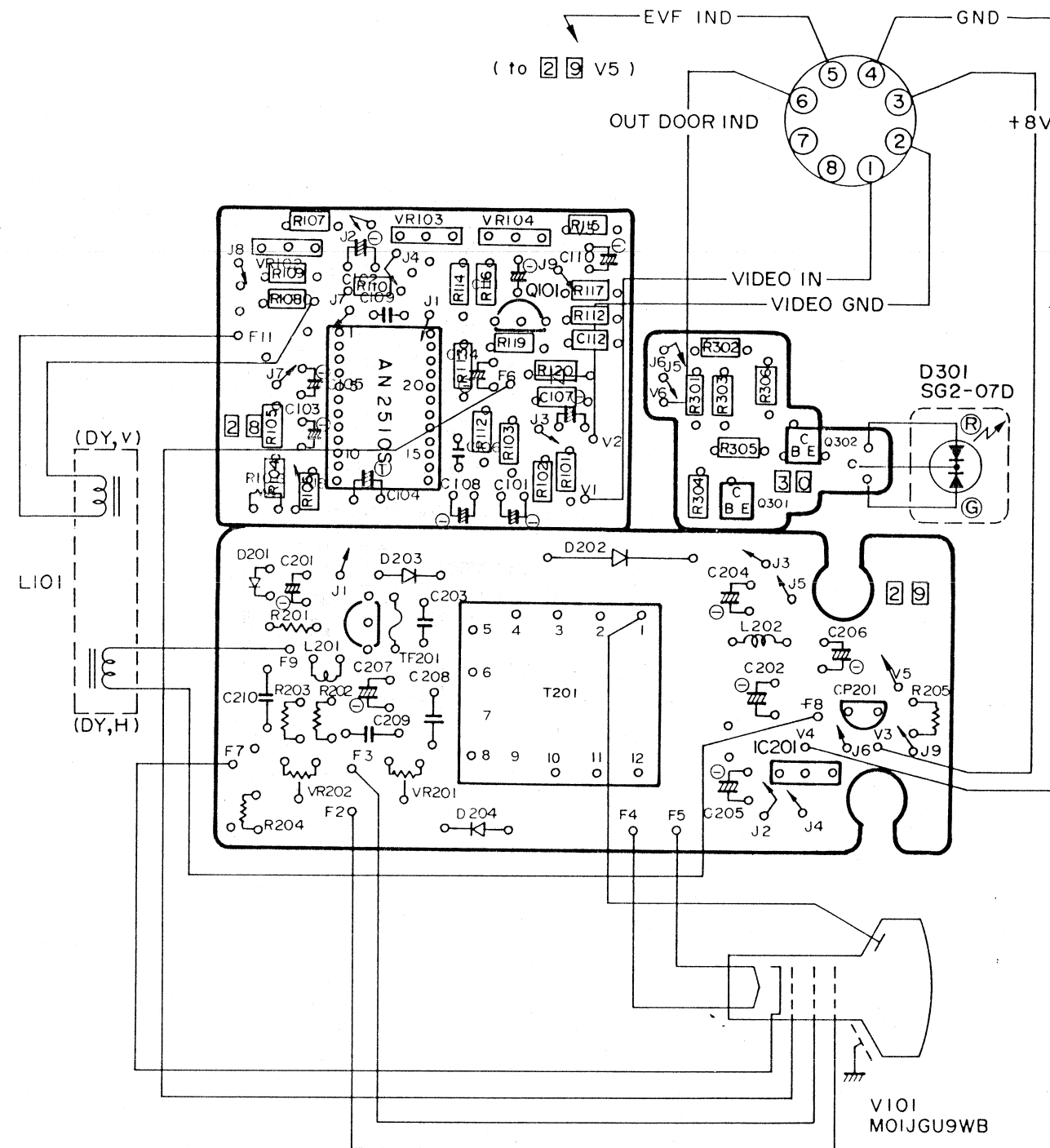
2 4 Camera Schalterplatte
Camera control PWB



23







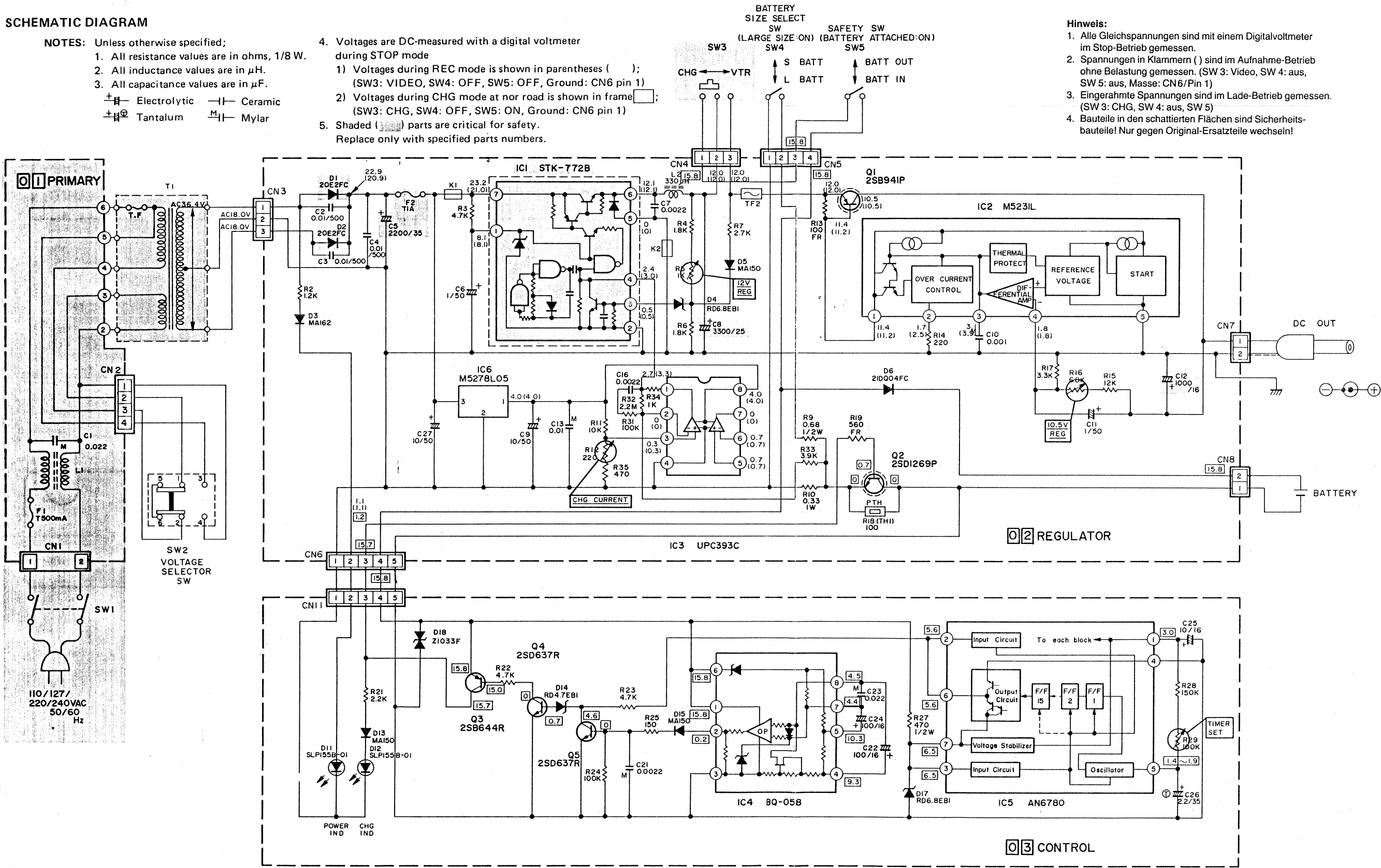
Netz- und Ladegerät
AC power adaptor and battery charger

SCHEMATIC DIAGRAM

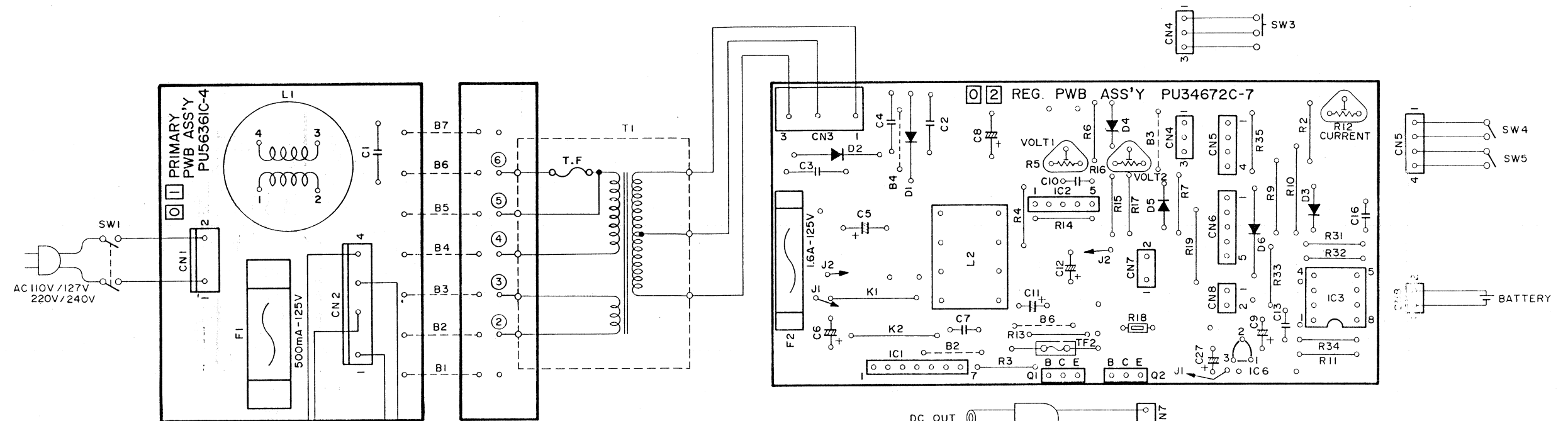
- NOTES:** Unless otherwise specified;
1. All resistance values are in ohms, 1/8 W.
 2. All inductance values are in μH .
 3. All capacitance values are in μF .
- + Electrolytic - Ceramic
 + Tantalum - Mylar

4. Voltages are DC-measured with a digital voltmeter during STOP mode
- 1) Voltages during REC mode is shown in parentheses ();
 (SW3: VIDEO, SW4: OFF, SW5: OFF, Ground: CN6 pin 1)
 2) Voltages during CHG mode at nor road is shown in frame;
 (SW3: CHG, SW4: OFF, SW5: ON, Ground: CN6 pin 1)
 5. Shaded () parts are critical for safety.
 Replace only with specified parts numbers.

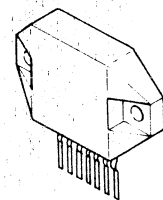
- Hinweis:**
1. Alle Gleichspannungen sind mit einem Digitalvoltmeter im Stop-Betrieb gemessen.
 2. Spannungen in Klammern () sind im Aufnahme-Betrieb ohne Belastung gemessen. (SW 3: Video, SW 4: aus, SW 5: aus, Masse: CN6/Pin 1)
 3. Eingehramte Spannungen sind im Lade-Betrieb gemessen. (SW 3: CHG, SW 4: aus, SW 5)
 4. Bauteile in den schattierten Flächen sind Sicherheitsbauteile! Nur gegen Original-Ersatzteile wechseln!



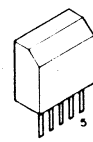
Netz- und Ladegerät AC power adaptor and battery charger



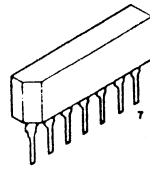
IC1 : STK-772B



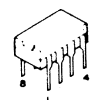
IC2: M5231L



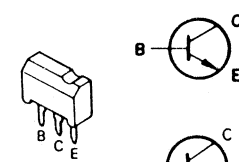
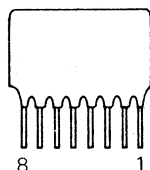
IC5: AN6780



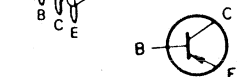
IC3: UPC393C



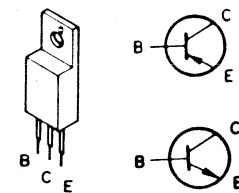
IC4 : BQ-058



Q3: 2SB644R



Q4, Q5: 2SD637R

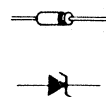


Q1: 2SB941P

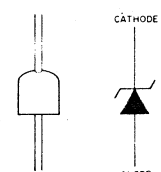


Q2: 2SD1269P

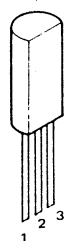
D4, D17 : RD6.8EB1
D14 : RD4.7EB1



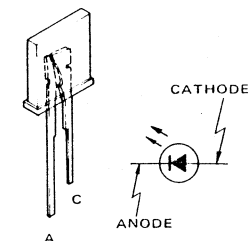
D18 : Z1033F



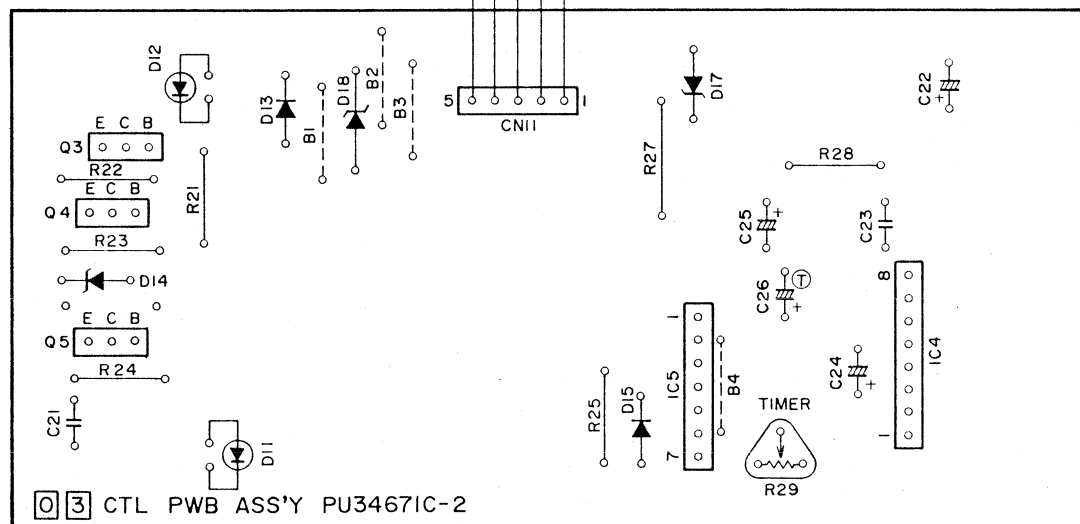
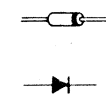
IC6 : M5278L05

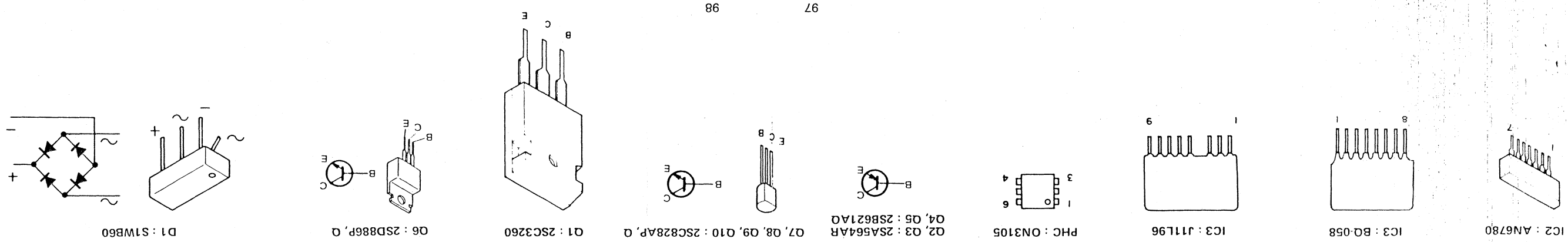
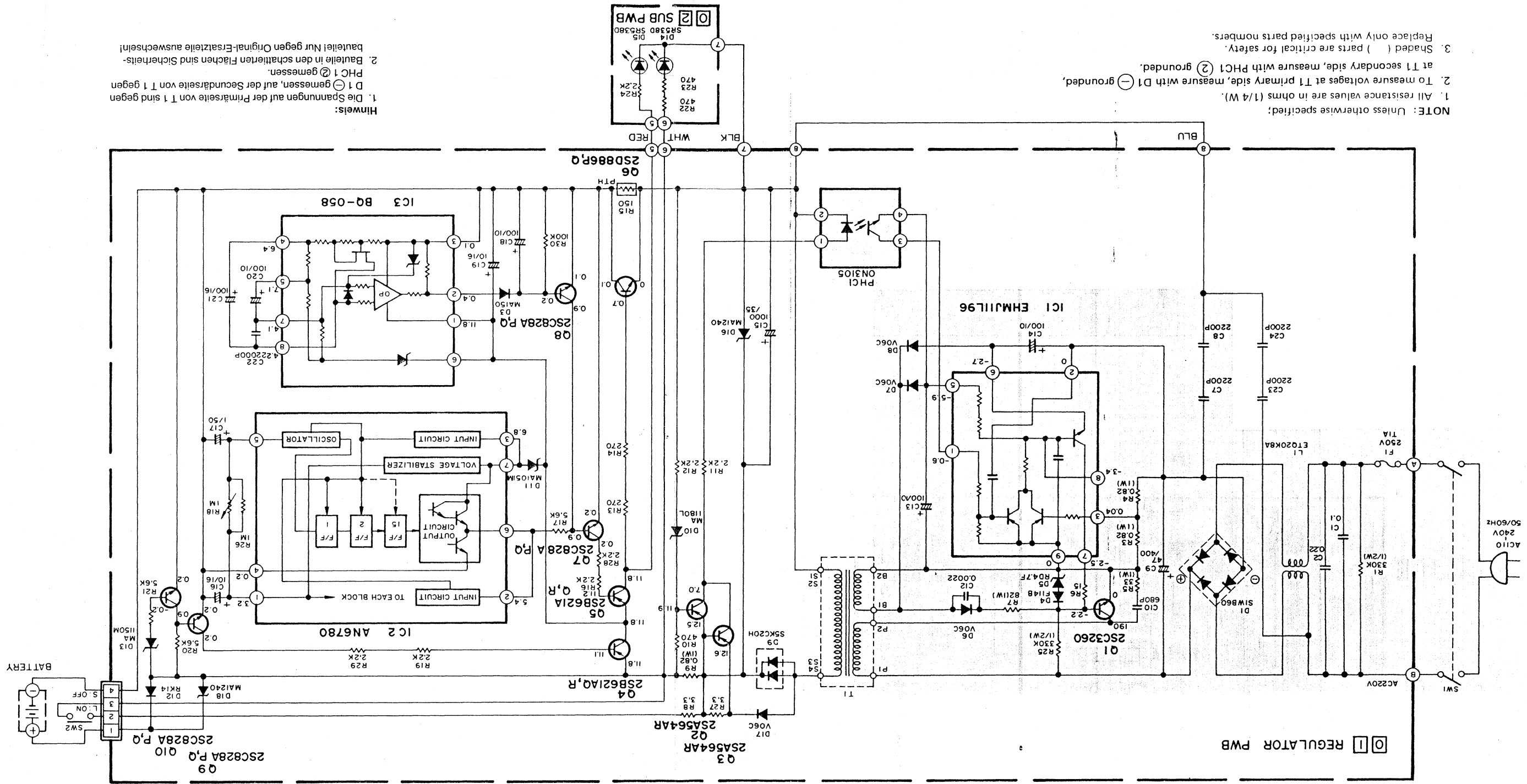


D11, D12 : SLP155B-01



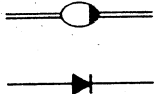
D1, D2 : 20E2FC
D3 : MA162
D6 : 21DQ04FC
D5, D13, D15, D18 : MA150



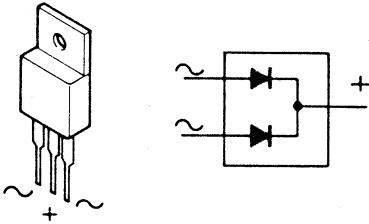


Akku-Ladegerät Battery charger

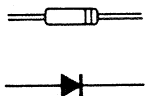
D6, D7, D8, D17 : V06C
D4 : F114B



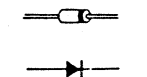
D9 : S5KC20H



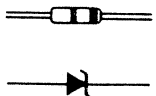
D3 : MA150



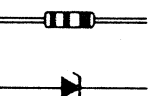
D12 : RK14



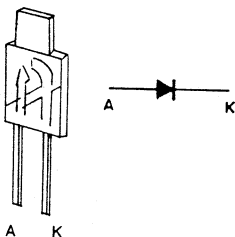
D10 : MA1180L
D13 : MA1150M
D16 : MA1240



D11 : MA1051M



D14, D15 : SR538D



D5 : RD4.7F

